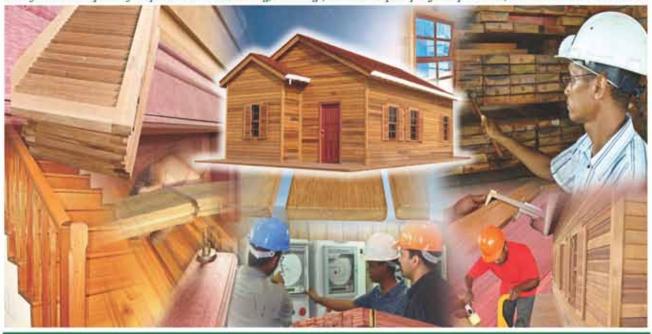
## BULKAN TIMBER WORKS INC.

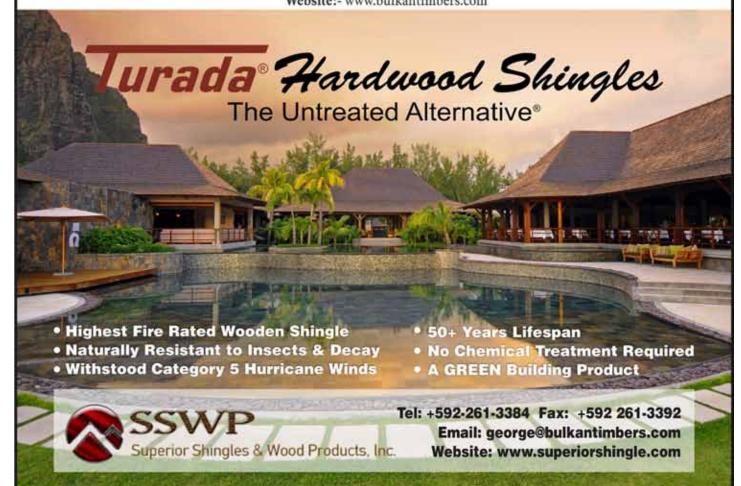
Manufacturer & Exporter of Guyana Hardwoods: Decking, Mouldings, Builders Carpentry & Joinery Products, and Other Kiln Dried Lumber

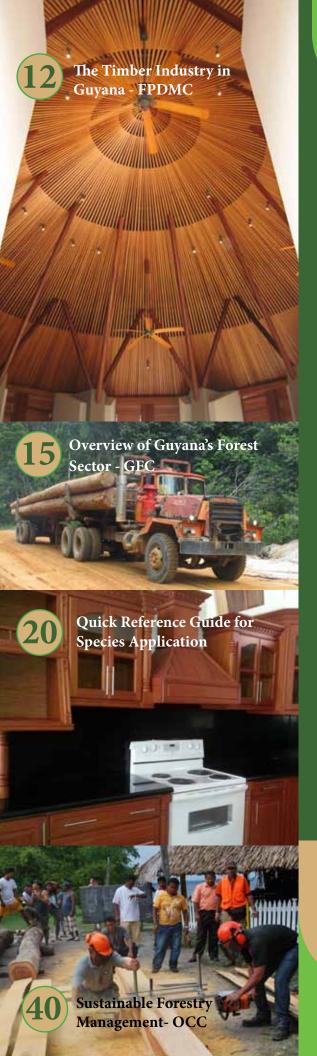


Factory:- Yarrowkabra, Linden/Soesdyke Highway, Guyana, South America.

Telephone:- (+592) 261-3391 or (+592) 693-2017 Fax:- (+592) 261-3392

Website:- www.bulkantimbers.com





#### FEATURES

4	Facts	of Guy	yana
---	-------	--------	------

60	MESSAGES:
<b>D</b> -9	MILOUITGLO

- His Excellency Donald Ramotar
- Hon. Minister Robert Persaud
- Chairman FPDMC Nizam Hassan
- GFC Commissioner James Singh
- 12-14 The Timber Industry in Guyana FPDMC
- 15-18 Overview of Guyana's Forest Sector GFC
  - 19 Forest Allocation Map
- 20-21 Quick Reference Guide for Species Application
- 24-25 Why do business with the Guyana Forest Industry?
- The Benefits of Adding Value to Timbers in Guyana's Economy
- Promoting wider application of Guyana's Lesser Used Wood Species the alternative solution
- 33-35 NTFP- A Sustainable and Expanding Industry in Guyana
- 38-39 | Profile of an Experienced Forester
- 40-42 Sustainable Forestry Management- OCC
- 43-44 University of Guyana On Training of Young Foresters
  - Forestry Training Centre Incorporated Providing Skills for the Forestry Sector
- **46-47** Iwokrama Links Business to Research: Applying Best Practices to Sustainable Timber Operations
- **49-50** FLEGT Guyana Supporting Responsible Trade for Guyana's Forest
  - 51 Main Shipping Services of Guyana

For information contact:-

Forest Products Development & Marketing Council Inc.

17 Access Road, Kingston, Georgetown, Guyana, South America
Tel: (592) 223.5135/6 | Fax: (592) 227.5595

Email: info@fpdmcguy.org | Website: www.fpdmcguy.org

Guyana Forestry Commission (GFC): 1 Water Street Kingston, Georgetown, Guyana. Tel: (592)- 226.7271/4 | Fax: (592) 226.8956 Email: mis@forestry.gov.gy

Designed, Layout & Printed By: Global Printing & Graphics Inc. Queens Atlantic Industrial Estate, Ruimveldt, Georgetown, Guyana Tel: (592) 227-0704/09 | 225-8696 | Email: glblprinting@gmail.com





An alliance of tropical hardwood timber companies with integrated further processing operations and worldwide sales and distribution outlets, aimed at satisfying your every timber

#### VISION

To be the FIRST CALL for Tropical Hardwood Timber Products from Guyana

#### MISSION

To guarantee quality timber products, services and customer satisfaction

AVAILABLE TIMBER SPECIES	SPECIALIZING IN INDUSTRIAL AND RESIDENTIAL	
Greenheart (Chlorocardium rodiei)	Marine timbers & pilings; fenders & bulkheads; lock gates; bridges; exterior cladding; exterior decking; interior flooring; wall panel and more.	
Mora (Mora exelsa)	Railway sleepers; crane mat; bridges; landscaping; industrial flooring.	
Purpleheart (Peltogyne pubescens)	Decking; flooring; wall panel; cladding; moulding; trellis; pergola.	
Silverballi (Aniba spp.)	Dimensional lumber for boat use.	
Wallaba (Eperua spp.)	Roofing shingles; square post.	
Wamaradang / Basralocus (Dicorynia guianensis)	Decking; flooring; wall panel; cladding; moulding; trellis; pergola.	





Affiliate Companies









(Head Office) 81 Stone Avenue Georgetown, Guyana

E: buy@woodsdirect.com W: WOODSDIRECT.COM Contact Information Guyana Tel: +592-227-0549 U.S.A. Tel: 1-407-982-3328

#### **FACTS ON GUYANA**

#### **TIME ZONE**

GMT- 04:00

#### **LOCATION**

Guyana is situated on the north east in South America and is the only English speaking country. It is between 10° and 90° North Latitude and 570° and 610° West Longitude, bordering Venezuela to the West, Brazil to the South and Suriname to the East.

#### **CLIMATE**

Guyana is a tropical destination that is pleasant and warm for most of the year, humid, moderated by northeast trade winds; two rainy seasons (May-June, November - January). Average temperatures 24 °C- 31 °C; mean temperature of 27 °C. Rainfall is approximately 2,300mm a year in Georgetown the capital city.

#### **GEOGRAPHY**

Guyana is the third smallest country in South America after Suriname and Uruguay. It has four distinct geographical areas: the Low Coastal Plain, the Hilly Sand and Clay Belt, the Highland Region and the Interior Savannah. The total area in square kilometers is 214,970 (83,000 square miles). About 85% of the land area is still forested, and only 2.5% is cultivated. The coastline lies 1 to 1.5 meters below sea level at high tide necessitating elaborate systems of drainage canals. The most valuable mineral deposits are bauxite, gold, and diamonds. The main rivers are Demerara, Berbice, Corentyne and Essequibo.

#### **GOVERNMENT**

Guyana became independent from Britain in 1966 and a Cooperative Republic in 1970, when a non executive President replaced the Governor-General. A new constitution in 1980 gave the President wide executive powers. The Cabinet is headed by the President, and there is a 65-member National Assembly elected by proportional representation.

#### **ECONOMY**

The forestry sector accounts for 4% of the national Gross Domestic Product producing logs, sawn lumber, ply wood, round wood, fuel wood, shingles, value added products and non-timber forest products (NTFPs).

#### TOTAL AREA

21.5 million ha

#### FORESTED AREA

18.3 million ha

#### STATE FOREST

12.6 million ha

#### ALLOCATED STATE FOREST ESTATE

7.3 million ha

#### ANNUAL TIMBER PRODUCTION RANGE

370,000m<sup>3</sup>-450,000m<sup>3</sup>

#### ANNUAL EXPORT VALUE RANGE

US \$40M-\$60M

#### **CONTRIBUTION OF SECTOR**

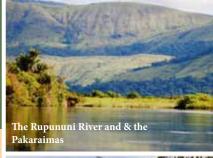
4% as a primary product

#### **GUYANA POPULATION**

Approximately 749,000 (Census 2012) of which 90% live along the coastal strip and banks of major rivers.

#### **DIRECT EMPLOYMENT**

> 26,000 persons



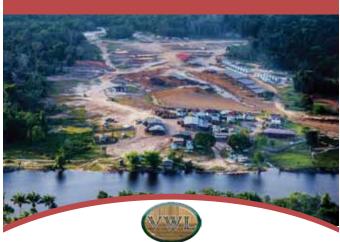












#### Variety Woods & Greenheart Ltd. Timber Producer and Exporter

Variety Woods and Greenheart Ltd. has been committed for over (25) twenty years to supplying superior quality tropical hard wood timber products and quality service to our valued customers across the globe.

We are a fully integrated logging, sawmilling and furtherprocessing operation which satisfy every need where tropical timbers are utilized.

- Premium Greenheart Piles
- Cladding/Panelling
- Interior Flooring
- Exterior Decking
- Pre-Drilled/Chamfered Timber
- Large Dimensional Timber
- Various Profiled Lumber
- Mouldings and more







- All Operations Fully compliant with Local Laws, Standards and Guidelines for Sustainable Forest Management
- Field operations based on the principles and practices of Reduced Impact Logging
- Verified Legal Origin (VLO) Certification by Rainforest Alliance
- Chain of Custody System Fully Functional
- Forest Ecology Respected, Biodiversity Conservation Reserves Protected







99 Laluni Street, Queenstown, Georgetown, Guyana Tel: (+592) 227-0381 | 226-8556 | Fax: (+592) 225-7348 Email: variety.eborabo@outlook.com

## BARAKAT Timbers & Trading Co. Ltd.

SAWMILLERS

LOGGERS

CONTRACTORS

We produce the highest and best quality lumber for export and local market. Our products:- Railway Sleepers, Crane Mats, Flooring, Pilings, Moldings, Decking & lumber for general construction



SPECIES OF WOOD WE PRODUCE:

Greenheart > Purpleheart > Kabukalli > Mora > Tatabu > Andiroba (Crabwood) Washiba (Ipe) > Jatoba (Locust) & other species of Hardwood

Our forest is managed in a highly sustainable manner

Charity Pomeroon River, Guyana, South America Tel: (592) 771.5200/5201 | Cell: (592) 649.1818 E:barakattimbers@gmail.com | www.barakattimbers.com



#### Message By His Excellency

#### **President Donald Ramotar**

President of the Cooperative Republic of Guyana





uyana's forest resources represent in excess of 85% of the country's land area. These resources provide direct employment for approximately 26,000 persons and contribute about 4% to the nation's GDP as a primary product. Even though we are cognizant that the rapid utilization of this resource will increase the sector's GDP contribution, and bring welcome financial resources for our accelerated socio-economic development, have consciously chosen not to follow

this path, unlike so many developed countries.

These along with other relevant initiatives have contributed to Guyana being recognized as a source of legally obtained and sustainably harvested forest produce. This has resulted in forest produce originating from Guyana having unhindered access to even the most demanding markets.

Potential investors in Guyana's forestry sector can therefore be assured that Guyana presents a very favorable environment, not only in terms of having unrestricted access to high end markets, but in terms of our very accommodating investment climate such as

fiscal incentives available based on type and size of investment.

The investment opportunities are abundant: from harvesting, to processing and manufacturing high end products especially using our lesser used species. For example, there is the possibility of using our dense, durable lesser used timbers for a wide range of applications- from products for the construction industry, to railway

sleepers and marine applications to name a few.

The industry has not developed as quickly as we had hoped. We still export a large percentage of our production in log form or as primary processed lumber. This obviously impacts on our ability to generate employment and revenue. Total current production is only about 40% of the allowable annual sustainable harvest. This is primarily due to a reluctance of forest concessionaires to harvest the Lesser Used Species (LUS), not because they are not durable or comparable in properties with the traditional species, but because of perceived problems with the marketing of same.

The Government of Guyana is willing to offer very lucrative fiscal incentives to those investors who are interested in the production and marketing of the value added products aspect of the industry, especially using the lesser used species. Other areas include kiln drying, wood preservation etc.

I, therefore, on behalf of Guyana, welcome potential investors in the forest sector and assure you of my Government's full commitment in supporting and facilitating your engagements in accordance with our national laws and guidelines.

## Donald Ramotar President of the Cooperative Republic of Guyana



#### Message By Minister of Natural Resources & The Environment



#### Hon. Robert M. Persaud, MBA, MP

analysis, and independently verified by international experts.

These positive facts have given Guyana international recognition and easy access to even the most demanding markets. Potential investors can therefore have the assurance that once they comply with the relevant policies/guidelines, their venture would be a profitable one; not only for

themselves, but for Guyana as a whole.

To further create a favorable climate for the continued development of the forest industry, the Government through the Ministry of Natural Resources and the Environment has taken a conscious decision to ensure that the sector has the requisite skills. In this regard, highly subsidized training is provided at the vocational, technical and professional levels. Additionally, highly specialized training is provided through our partnerships with international organizations such as ITTO and FAO in key disciplines such as sawmilling.

In addition to the traditional areas of harvesting, primary and limited secondary processing and manufacturing of a range of value added forest products, there are tremendous opportunities for joint ventures with existing companies for harvesting, processing and manufacturing.

There is also great potential for the manufacture of high end value added products, from the utilization of the Lesser Used Species (LUS) (which can boost harvesting levels closer to the maximum annual sustainable harvest of 1.6 million cubic metres of logs, from the current harvesting level of 470,000 cubic metres), kiln drying, establishment of a consolidation "zone" for collection of logs, chainsaw and mill sawn lumber which is then further processed and manufactured/kiln dried into dimensional lumber and other high end products. The marketing of products from the Lesser Used Species and products from traditional species to new and more lucrative markets also presents an opportunity for investment. The sale of appropriate low cost machinery/equipment, the provision of services such as specialized training, consultancies in forest inventory and environmental/social impact assessments, preparation of Annual Operational/Forest Managment Plans represent other investment opportunites.

Guyana's forestry sector therefore offers significant openings for local and foreign investors. Further, the Government of Guyana offers very attractive fiscal incentives that are based on the type and level of the investment, employment opportunities created, amongst other factors.

We are ready to partner with you as together we further develop this already established industry, and we encourage you to contact the Forest Products Development and Marketing Council (FPDMC) for additional information on Guyana's forestry products.

May 2014

Robert M. Persaud Minister of Natural Resources & The Environment

he state forest estate of Guyana comprises 12.6 Million hectares (ha) of prime tropical forest which is approximately 85% of the total forest estate. This forest resource is part of the Guiana shield, as well as an integral component of the Amazon basin and contains in excess of 1000 tree speciesmost of which have physical and mechanical properties that make them suitable for commercial utilization.

Of the 12.6M ha of state forest, approximately 52% has been allocated via a transparent process as forest concessions for harvesting. In accordance with the updated forest legislation and policy, the Guyana Forestry Commission (GFC) has coordinated the preparation of collaboratively developed guidelines for Sustainable Forest Management which build on the foundation of Food and Agriculture Organisation (FAO) and International Tropical Timber Organisation (ITTO) recommendations. Selective harvesting is mandatory. These in combination have resulted in the rate of deforestation/forest degradation being less than 0.08% per annum, as determined by 5 metre satellite imagery



Message By Chairman Forest Products Development & Marketing Council Guyana Inc.

#### Nizam Hassan

he Forest Products Development & Marketing Council Inc. (FPDMC) was established in October 2008 by the Government of Guyana following consultations with industry stakeholders in the private sector, as a successor to the then Forest Products Marketing Council (FPMC). Recognizing the need to support further development of the forestry sector by promoting and enhancing value-added forest products development, stakeholders concurred to add development as one of the core functions of the "new" council.

Since its establishment the Council has been actively involved in executing its mandate. Working closely with the Guyana Forestry Commission, the Forest Products Association, the Guyana Manufacturing & Services Association, Community Logging organizations, and other stakeholders, the council ensures that its work represents the needs of the sector.

With its vision to be the lead organization in the development and marketing of Guyana's forests products, the Council is happy to be associated with the Timber Trade magazine. This magazine is one of the many means by which the Council executes its mandate.

The Board of Directors of the Council made up of industry representatives from both the private and public sector are fully committed towards supporting the development of value added activities in the industry, and the utilisation of Lesser Used Species of timber. The Council through its numerous stakeholder engagements and publications promotes the economic benefits both in terms of income and employment generation

that can be derived from the further processing of timber.

We are happy to record that as our markets evolve and develop, there has been a significant increase in both the quantity and quality of timber products that are produced locally. The evolving local market presents many opportunities for investors in the industry. Home builders, eager to occupy their homes, require mouldings, spindles, doors, windows, cupboards, and many more products for their homes. Such requirements presents opportunities for high quality kiln dried wood products. Opportunities also exist in International markets for many products that Guyana can produce.

The Forest Products Development and Marketing Council stands ready to provide guidance, advice and other business facilitation services to assist all stakeholders on aspects of product development and marketing of lesser Used Species of timber and valued added forest products.

Nizam Hassan Chairman FPDMC





uyana's forests are amongst the last remaining intact tropical forests in the world and are home to a rich and varied biodiversity, inclusive of over 1000 tree species.

The forests are not homogenous; in any single hectare, dozens of species can be found. Whilst some of these are well known in the local and export markets, the vast majority are still to be fully researched and marketed effectively.

This would also help to reduce the pressure on the harvesting of the traditional species and prevent any possibility of overharvesting of these species.

Guyana has made tremendous advances in forestry management over the last two decades. We have taken key guidelines and best practices that were developed by International Organizations; field tested and then adapted same to the Guyana specific condition via a fully participatory process.

Thus, we now have Codes of Practices for harvesting of timber and non timber forest products, and for processing operations, in addition to several others (www.forestry.gov.gy).

The sector is also regulated in a very transparent and public manner, and governed by very recent legislative

## Message By Commissioner of Forests James Singh

and policy documentation that can be accessed at (www.forestry.gov.gy).

Our guidelines, standard operating procedures, training of staff and stakeholders, monitoring and evaluation procedures, level of implementation of guidelines by stakeholders, etc have been subject to intense scrutiny by Independent and reputable International Auditing Firms/ Auditors - all have come to the conclusion that Guyana has very credible systems in place which are functional and adaptive.

Evidence of this is also demonstrated by Guyana's deliberate choice to monitor deforestation and forest degradation at 5 metre satellite imagery resolution countrywide. Through this, we have proven globally that though commercial harvesting has been ongoing for decades, our rate of deforestation/forest degradation is less than 0.08%. This links back to the effective implementation of our policies and systems on the ground.

In addition to harvesting of timber products, Guyana has also become integrally involved in the climate change mitigation services of our forests and we have entered into a pioneering venture with the Kingdom of Norway where Guyana can earn up to US \$250M by 2015 for forest carbon services.

These initiatives have reinforced Guyana's profile as a source of legally obtained forest products from sustainably managed forests. Access to markets continue to be fairly easy; but to ensure better and guaranteed market entry, Guyana has embraced some

new initiatives such as the EU FLEGT VPA, Independent Forest Monitoring etc- all in an effort to satisfy the most demanding of customers.

Currently, harvesting is only about 40% of its full sustainable harvest. Sadly, a lot of this production is exported in log form and the processing being done is at relatively low intensity.

The industry therefore has great room for improvement. There are opportunities which include: increasing the harvesting intensity, promoting the lesser used species for a range of applications, establishing processing facilities for the manufacturing of added value products, developing new product lines; room also exists for offering specialized training, for providing consultancy services, for supplying better and low cost technology- all of which are much needed to improve the capacity and profitability of investors.

Guyana through the Guyana Forestry Commission stands ready to provide advice, guidance and support to serious investors who commit to a long term relationship; one that respects national rules and the need to support the socio-economic development of their Guyanese employees.

Once these integral components are in place, they will create the foundation for a very profitable and enjoyable investment in Guyana's forest sector.

James Singh GFC, Commissioner



## Hadco Farm & Sawmill

82 Collingswood Avenue, Nandy Park, East Bank Demerara, Guyana, South America

□ (592) 663.8215 □ (592) 623-0008

□ vincentdavid272@hotmail.com | www.hadcofarm.com

**Fill Hadco Farm and Sawmill** 



#### We are suppliers of:-

- **♦** Greenheart
- ◆ Purpleheart
- ★ Kabukalli
- Silverballi
- ◆ Tatabu
- Red Cedar
- Locust
- Bulletwood
- ♠ Crabwood
- Shibidan
- Washiba
- and other exotic Tropical Hardwood mainly for export markets.

#### Manufacturers & suppliers of:-

- Doors
- Spindles/Pedestals
- Windows
- V-Joints
- Floorboards
- Decorative Mouldings
- Cabinet Doors
- High end Kitchen Cabinets
- Bedroom Closets
- Dining Room Sets

Here at HADCO we also specialize in Kiln Dried Lumber (3 units at 20,000 sqft each) and Dressed Lumber.

## Guyana Marketing Corporation

Facilitating and coordinating the development of quality non-traditional agricultural produce for export

#### GUYANA SHOP

Promoting locally produced and manufactured non-traditional agricultural products

## EXPORT PACKAGING FACILITIES

Refrigerated (Cold Storage) Facilities

Refrigerated Trucking Service

#### MARKETING INFORMATION CENTRE

Advisory, Agri-Business Development Export Brokerage, Market Analysis



87 Robb and Alexander Streets Lacytown, Georgetown, Guyana Tel: (592) 226-8255; 227-1630

Fax: (592) 227-4114

Email: info@newgmc.com Website: www.newgmc.com

## LINEAR WOOD PRODUCTS Sawmilling Complex Export & Local Sales Serving the Guyanese and International community

Serving the Guyanese and International community for over 15 years, we have grown to be one of Guyana's leading producers and suppliers of high quality exotic hard wood and soft wood products.

We specialize in:

- Kiln Drying
- Dimensioned Lumber
- Hardwood & Greenheart Piling
- Wallaba Shingles & Poles etc.
- Hardwood Decking
- ▲ Lot 3-15 Brickery, East Bank Demerara Guyana, S. America
- +592-266-5031
- **\*** +592-266-5247
- linearwoodspro@gmail.com
- Linear Wood Products Guyana Inc.





ased on international commitments that Guyana has entered into with regards to the conservation and preservation of its forest, Guyana can currently harvest up to 1.6 million m³ of logs annually. However, the Chart below shows that production fluctuated during the period 2006-2013 with a high of 513,240m³ in 2006 and low of 377,609m³ in 2009. The average production over the eight years period is 420,129m³. It therefore means that the country has the capacity to harvest a significant

further value added processing.

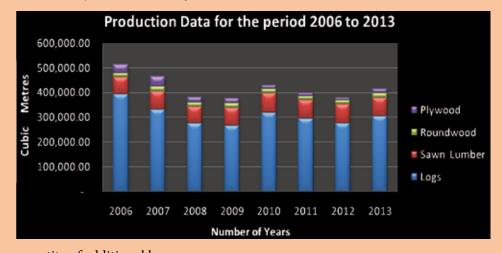
The low production recorded after 2007 can be attributed to the global financial crisis which began in 2008. According to the (International Tropical Timber Organization (ITTO), Riding out the Storm March 2013), "ITTO consumer and producer countries were severely impacted by the global financial and economic crisis which stemmed from the US subprime mortgage crisis in 2007. This crisis triggered a sudden plunge in housing starts and consumer demand for wood products in traditional markets,



global economic recovery taking shape the signs are already evident that the industry is on the path to recovery. This is borne out by the 2013 production figures and further supported by production figures so far in 2014.

Log exports at an average of 108,749m<sup>3</sup> over the eight year period, is still regarded as being high in the Guyana context. (see Chart II). Guyana has taken a conscious decision to promote more value added industries and efforts are now being made to lower the exportation of logs without disrupting the viability of the industry. This has resulted in the collaborative development of a National Log Export Policy, now in its 2<sup>nd</sup> phase of implementation (www.forestry.gov.gy for more details).

It is hoped that with the improved performance of the economies of ▶



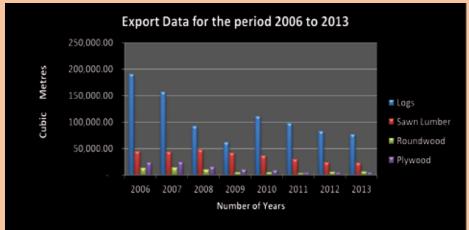
quantity of additional logs.

The chart also reflects that primary processed timber products such as sawn lumber averaged 73,121m<sup>3</sup>, round wood averaged 18,243m<sup>3</sup>, and plywood averaged 20,937m<sup>3</sup>, over the eight year period. It is evident from the above information that there is scope for

resulting in cancelled orders, depressed prices and a sever rationalization of the tropical wood processing industries in producer and consumer countries."

Guyana's timber industry was not spared this onslaught of economic downturn. However, with the





the USA and European countries, the demand for timber products would meet and exceed levels that existed before the crisis began.

According to the Guyana Forestry Commission 'Forest Sector Information Report 2012', 'Guyana's main markets in terms of export value and volume continue to be the Asia/Pacific region for Logs and Undressed Lumber, Latin American/ Caribbean region for Dressed Lumber and Splitwood, North America for Roundwood specifically Piles and Plywood. A growing local market for timber and timber products also exist, particularly in the utility and housing and construction sub sector as the Government of Guyana continues to expand their land distribution projects'

With the Government of Guyana continuing its policy of distributing

thousands of house lots to eligible Guyanese, the demand for timber on the local market is expected to remain strong. In view of the continued robust performance of the economies of India and China, the Forest Products Development and Marketing Council (FPDMC) predicts that these markets would continue to absorb significant amounts of logs and to a lesser extent other timber products that are produced, such as garden furniture, doors, flooring etc.

The commercial species that continue to drive the industry includes; Greenheart, Purpleheart, Locust, Kabukalli, Red Cedar, Wamara and Washiba. Recently however, there has been a noticeable shift towards the usage of the Lesser Used Species (LUS) such as Limonaballi, Tonka Bean, Fukadi, Black Kakaralli and Darina, just to name a few. These species have been proven to have comparable physical

and mechanical properties to the more traditional commercial species and are abundant in Guyana's forests.

To further consolidate Guyana's good market access in 2012, Guyana commenced formal dialogue with the EU with the intention of entering into a Voluntary Partnership Agreement (VPA) governing the trading of timber products between Guyana and that trading bloc. This agreement which is known as the European Union Forest Law, Enforcement Governance and Trade (EU FLEGT) satisfies the mandate of EU countries. The intention of this agreement requires timber products entering that region are from legally verified origins and that they meet prescribed harvesting conditions. When these are completed this >





would conditions. When these negotiations are completed this would enable Guyana to secure a greater market share for its forest products in that part of the world.

In addition to the EU FLEGT agreement, Guyana is a partner to numerous other trade agreements with other countries. These include the Guyana-Caricom Free Trade Agreement, the Guyana-Brazil Partial Scope Agreement, the Caricom-Cuba Trade and Economic Co-oporation Agreement Caribbean Basin initiative and the CARIFORUM-EU Economic Partnership Agreement. These agreements would allow access of the country's timber products to those markets on a tariff free basis.

With the expected increase in forest products consumption both locally and internationally resulting from the global financial recovery, Guyana would have to increase its productive capacity to meet this growing demand. The economic conditions of the country satisfy the prerequisites that are required for investments in the industry.

The country has been experiencing strong economic growth over the last five years averaging over 5% per annum. The exchange rate of the Guyana dollar has been relatively stable over this period of time and the banking institutions have the liquidity to extend to borrowers if the need arises.

The Government's policy also welcomes Foreign Direct Investments (FDI) and recently there have been significant foreign investments in the forestry sector. These investments are geared essentially at promoting growth in the value added sector. Not withstanding the investments that have been made. there are other areas where FDI could play a major role in stimulating growth in the industry. These areas include investment in the manufacturing sector to produce items such as safety matches, mosquito coils, wooden clothes pegs, wooden toothpicks, skewers, tongue depressors, wooden venetian blinds, briquettes, wooden curtain fixtures just to name a few. The FPDMC has done extensive research on these products resulting in significant amounts of information being available to serious investors.

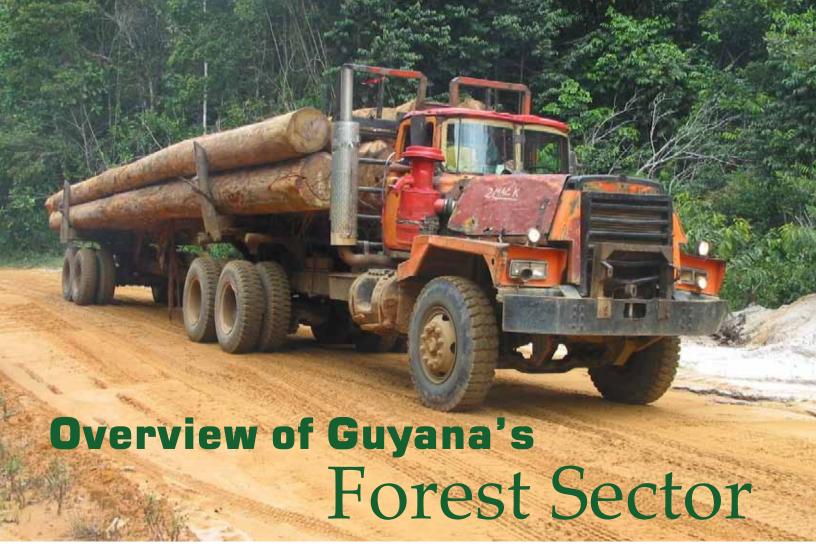
Another area that is ripe for investment is the establishment of a consolidation log yard where suppliers can sell their products in bulk and consumers can readily obtain their supplies. This should prove to be a lucrative business.

There is also scope for investment in an establishment that caters for specialized training/consultancy in areas such as sawmilling/saw doctoring, forest inventory, forest management plans/annual operating plans. Such expertise would certainly supplement training offered by the local institutions.

The country remains open to additional investment initiatives in the industry and we at the Forest Products Development and Marketing Council Guyana Inc. (FPDMC) encourage you to partner with us as we seek to further accelerate the development of Guyana's forestry sector.

Forest Products Development & Marketing Council of Guyana Inc. (FPDMC)





ersons wishing to invest in any sector want evidence that the sector is competitive, profitable and well regulated. They also want the assurance that the sector is governed by appropriate legislation and policies, and the security that these would not be subject to ad-hoc changes in a manner that would have negative implications for their investment.

Guyana's forest sector meets all of these conditions. For example, the sector has been manufacturing forest products for both local/export markets for decades, but there still exists a tremendous potential for expansion to the already well established as well as the newer markets. Average production for the last five (5) years is approximatly 430,000 m³ of logs annually, and this can go as high as 1.6 million m³ annually and still meet the stringent sustainable management guidelines

existing.

Support to the sector is provided by the Guyana Foestry Commission (GFC) which is the Government Agency responsible for the sustainable management of Guyana's State Forest Resources. This Commission is well resourced; it has forest stations countrywide, some of which operate on a 24 hour basis. The GFC is supported by the Forest Products Development and Marketing Council (FPDMC), the Forestry Training Centre Incorporated (FTCI), University of Guyana (UG), Guyana School of Agriculture (GSA).

The GFC and the other land use agencies such as the Guyana Geology and Mines Commission (GGMC) and the Guyana Lands and Surveys Commission (GLSC) all come under the oversight of the Ministry of Natural Resources and the Environment (MNRE). Competing land uses are

therefore now more harmonized- thus giving investors in the forestry sector a greater degree of security and comfort.

## Policy and legal framework

Additionally, both the policy and legislative framework have been recently updated taking into account current national/international advances. This was done via a thorough participatory and consultative process involving national and international stakeholders/partners.

These policy and legislative documents include the Guyana Forestry Commission (GFC) Act, Forests Act, Low Carbon Development Strategy (LCDS), National Forest Policy, National Forest Plan, National Log Export Policy, National Log Tagging and Log Tracking System, GFC Codes of Practice-Forest ▶

Operations, Processing, Non Timber Forest Products; and Guidelines for the Preparation of Forest Management Plans/Annual Operational Plans.

All of the above can be accessed at the GFC's website: www.forestry.gov.gy

The GFC does significant extension work to promote the understanding of the policies, plans and guidelines to all direct and indirect stakeholders. GFC also does very comprehensive monitoring to verify the level of implementation compliance. and The facts show that adherence to the policies/plans/guidelines is very satisfactory. This has also been verified by international auditors who have done independent forest monitoring. Also, satellite imagery at 5 m resolution has confirmed that Guyana's rate of deforestation/forest degradation is a mere 0.08% even though commercial harvesting has been on-going for decades. Because of these, market access is not a problem.

This conducive environment has resulted in Guyana having an excellent international profile as a source of forest products harvested from legal and sustainable sources; evidence of this is shown by the fact that the International Tropical Timber Organization (ITTO) has recognized Guyana as one of the few tropical producer countries that is implementing sustainable forest management at the level of the Forest Management Unit (concession level). Further, FAO has mentioned Guyana as one of the countries that has demonstrated exemplary forest management.

To ensure that there are no future barriers to trade, the Government of Guyana has advanced on several initiatives which further demonstrate global community, the legality commitment to forest sustainability. social and environmental best practices. These include, Independent Forest



Monitoring (IFM), Reducing Emissions from Deforestation and Forest Degradation (REDD+), EU Forest Law Enforcement, Governance and Trade (EU FLEGT).

## Investing in the Forestry Sector

Guyana has vast forest resources that cover more than three-quarters of its landmass and contain over 1,000 different tree species. Currently, 120 species are being logged in various forms; between 30 and 50 of these being logged on a commercial scale. The most sought after species include Greenheart (Chlorocardium rodiei), Mora (Mora excelsa and Mora gonggrijpii), Baromalli Catostemma

spp.), Purpleheart (*Peltogyne spp.*), Crabwood (*Carapa guianensis*), Kabukalli (*Goupia glabra*), and Wamara (*Swartzia leiocalycina*).

Whilst Guyana is traditionally known for its export of timber in raw or semi-processed forms, the Government and stakeholders of the forest industry have placed an emphasis on promoting value-added forest product production for export to the Caribbean, U.S, Europe and other markets.

There are a number of comparative advantages similar to those found in other light manufacturing industries, such as affordable and trainable labor, as well as attractive investment incentives.



#### **Investment Opportunities**

A number of lucrative opportunities exist for investors interested in working with Guyana's wood industry. These include access to forest concessions for harvesting of logs and nontimber forest products, furniture (e.g. hardwood and wicker), plywood and veneers, mouldings, doors, parquet, floor tiles and dimensional lumber. Additional consideration could be given to the establishment of consolidation "stockyards" at strategic locations where logs/lumber can be stockpiled for further processing and treatment such as kiln drying/preservation from attack by insects/fungi, and export of forest produce. Here, a lucrative investment opportunity also exists for the manufacturing of high end added value forest products for niche markets.

There are also opportunities for investing in the establishment of portable/fixed mills and lumberyards countrywide to support the vibrant local construction industry, as well as the export market.

The various licenses for sawmills, lumberyards, export of forest produce etc. are all issued by the GFC; the basic requirements are the license fees, proof of legal access to the land and no objections from the Environmental Protection Agency (EPA), and the Central Housing and Planning Authority (CHPA).

There are also a number of opportunities to expand the development and marketing of lesser-known species where utilization is well below capacity or where species are yet to be utilized commercially. Currently, the total Annual Allowable Cut under sustainable management guidelines is approximately 1.6 million m³, but average annual harvest is about 430,000 m³, and consists predominantly of a few traditional species.

As such, a tremendous opportunity exists for harvesting logs of the lesser used species, and manufacturing of lumber/added value products from these; especially since reputable laboratory testing/evaluation has confirmed that some have physical/mechanical properties similar to the traditional species.

Avenues also exist for doing forest consultancies such as ESIA's, Forest Inventories, Forest Management Plans and Annual Operational Plans, training in specialized areas e.g. sawmilling, saw doctoring, manufacture of added value products from timber and non timber forest material.

Within this sector, additional value can be achieved on investments that meet the requirements of certain environmental and social certifications from organizations such as the Forest Stewardship Council (FSC).

## Timber Concessions in Guyana

Approximately fifty-two percent (52%) of the State Forest Estate have been allocated to timber harvesting under sustainable forest management techniques to ensure the sustainability of Guyana's Forest Resources.

Three types of concessions are awarded based on area size and duration via a transparent, competitive process:

- Timber Sales Agreement (TSA)granted up to thirty years for areas in excess of 24,000 hectares.
- Wood-Cutting Lease (WCL)granted for up to ten years for 8,000-24,000 hectares.
- State Forest Permission (SFP)granted for a two-year period on no more than 8,000 hectares.

Before investors are granted a TSA/WCL for commercial harvesting, they must complete satisfactorily an Environmental and Social Impact Assessment (ESIA), a Forest Inventory, and a Business Plan within a three (3) year period.

Twice yearly, the GFC publicly advertises areas that are available for allocation as forest concessions.

#### **Investment Incentives**

In addition to the general incentive that Guyana offers investors, this sector attracts special incentives. These include:

 exemption from Customs Duty of a wide range of forestry and sawmilling equipment-skidders, band saws, chain saws, saw blades etc.



- exemption from Customs Duty on a wide range of wood working equipment-lathes, sanders, routers, saws.
- exemption from duties and taxes for items covered under an Investment Agreement.

#### **Supporting Investors Every Step of the Way**

Investors can receive assistance from a number of Government and private sector organizations involved in the forestry sector.

The Guyana Forestry Commission (GFC) is the Government agency responsible for the administration and management of the 12.6 million hectares of land classified as State Forest.

Moreover, the Guyana Office for Investment (GO-Invest) was established in 1994 to stimulate, facilitate, and promote the development of trade and industry, especially the diversification of investment activities in all sectors

of the Guyanese economy. It facilitates investment in eight (8) priority sectors, including the Forestry Sector through waivers in duties and taxes for various equipment and machinery.

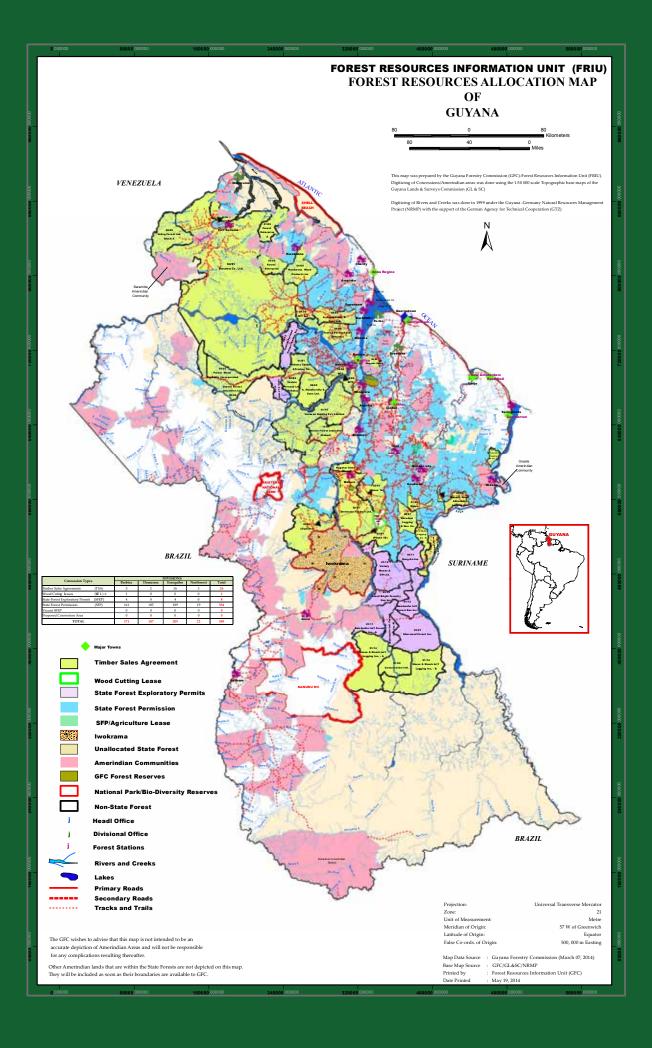
There is also the Forest Products Association (FPA) which represents private timber producers and has substantial practical knowledge of timber production and forest uses. It collaborates with the Guyana Forestry Commission in selected training and research initiatives.

In addition, the Guyana Manufacturers and Services Association represent the interests of downstream wood products manufacturers.

Finally, the Forest Products Development & Marketing Council has as its mandate: to ensure the sustainability of Guyana's Forest Products industry by increasing the quantity of value-added products and improving its competitiveness to enhance market access and increase trade opportunities.

Guyana Forestry Commission ©





## Quick Reference Guide For SPE



#### **CARPENTRY:**-

Black Kakaralli (piling), Tonka bean, Morabukea, Kautaballi, Kokoritaballi, Wina Kakaralli, Fukadi, Darina, Limonaballi, Greenheart, Shibadan, Suya, Purpleheart, Burada, Bulletwood, Wina, Tauroniro.



#### **HOUSE FRAMING:**

Black Kakaralli, Tonka bean, Morabukea, Kautaballi, Kokoritaballi, Wina Kakaralli, Fukadi, Darina, Suya, Purpleheart, Bulletwood, Wina, Tauroniro.



#### **WALL PANELS:-**

Darina, Itikiboroballi, Kurokai, Kabukalli, Greenheart, Crabwood Wamara, Purpleheart.





#### OUTDOOR FURNITURE:-

Black Kakaralli, Tonka bean, Wamara, Morabukea, Kautaballi, Kokoritaballi, Wina Kakaralli, Fukadi, Darina, Kabukalli, Greenheart, Purpleheart, Determa.



#### **RAILWAY SLEEPERS:**-

Kabukalli, Mora, Black Kakaralli, Wallaba, Tonka Bean, Black heart, Burada, Bulletwood, Wina, Locust.



#### FLOORING:-

Black Kakaralli (piling), Tonka bean, Morabukea, Kautaballi, Kokoritaballi, Wina Kakaralli, Fukadi, Darina, Limonaballi, Greenheart, Shibadan, Suya, Purpleheart, Burada, Bulletwood, Wina, Tauroniro.



#### **CABINETRY:-**

Itikiboroballi, Darina, Fukadi, Cow wood, Kabukalli, Crabwood, Wamara, Purpleheart, Locust, Determa

## CIES Application



**DECKING:-**

Morabukea, Kabukalli, Purpleheart, Locust, Mora, Brown Silverballi.



**POLES, POSTS & PILES:** 

Greenheart, Black Kakaralli, Wallaba, Suya.



#### **STAIRCASES:**-

Itikiboroballi, Darina, Burada, Black Kakaralli, Tonka Bean, Kurokai, Morabukea, Kabukalli, Greenheart, Crabwood, Bulletwood Wamara, Purpleheart, Locust, Mora, Bulletwood.



#### **MOULDING:-**

Futui, Dalli, Wadara, Darina, Duka, Kabukalli, Greenheart, Crabwood, Simarupa, Wamara, Purpleheart, Locust, Determa.



#### **JOINERY:-**

Morabukea, Wadara, Muniridan, Darina, Duka, Maho, Kabukalli, Crabwood, Wamara, Purpleheart, Locust



#### **CEILING PANELS:-**

Darina, Korokororo, Tauroniro



- 1. Greenheart (Chlorocardium rodiei)
- 2. Purpleheart (Peltogyne venosa)
- 3. Locust (Hymenaea courbaril)
- 4. Kabukalli (Goupia glabra)
- 5. Red Cedar (Cedrela odorata)
- 6. Wamara (Swartzia leiocalycina)
- 7. Washiba (Tabebuia spp.)
- 8. Limonaballi (Chrysophyllum pomiferum)
- 9. Tonka Bean (Dipteryx odorata)
- 10. Fukadi (Buchenavia fanshawei)
- 11. Black Kakaralli (Eschweilera spp.)
- 12. Darina (Hymenolobium spp.)
- 13. Mora (Mora excelsa)
- 14. Suya (Pouteria speciosa)
- 15. Tauroniro (Humiria balsamifera)
- 16. Bulletwood (Manilkara bidentata)
- 17. Crabwood (Carapa guianensis)
- 18. Soft Wallaba (Eperua falcata)
- 19. Shibidan (Aspidosperma spp.)
- 20. Tatabu (Diplotropis purpurea)
- 21. Simarupa (Quassia simarouba)
- 22. Determa (Sextonia rubra)
- 23. Wadara (Couratari spp.)
- 24. Kereti Silverballi (Ocotea spp.)

Information supplied by:

Forest Products Development & Marketing Council of Guyana Inc. http://www.fpdmcguy.org/Posters/default.aspx



#### **NOGGING:-**

Korokororo, Hiariballi, Duka, Silverballi, Simarupa



SHINGLES:-Wallaba, Red cedar



#### Bai Shan Lin International Forest Development Inc

Bai Shan Lin International Forest This state of the art Wood Processing Development Inc is a privately owned company whose commercial interest focuses on materials for building and infrastructure construction. The company was established in Guyana on September 27, 2006 and from thereon began to develop itself with help from the government and people of Guyana, thus embarking on various projects such as Bai Shan Lin's Exhibition Center and Housing Development located at Providence and Bai Shan Lin's Integrative Wood Processing Factory in Linden, among













#### Wood Processing Factory

Factory located in Linden will certainly be an asset to the building sector; providing products of excellent quality such as floor boards, cupboards, Roof punels, doors, etc., these products will be made of the finest quality wood using the most modern equipment. In addition to good quality products Bai Shan Lin's Wood Processing Factory will also provide employment for over 2000 people.

#### **Exhibition Center**

The company has recently acquired eight(8) acres of land at Block No. 111. Zone: Plantanon Providence, East Bank Demerara of which the Edubition Center will be crected at the cost of US\$10M. This one of a kind Edubinon Center will house the company's Head Office and will also display the company's products which will be made available to both local and Foreign Markets

#### Housing Development

In addition to the eight (8) acres of land given to build the Exhibition Center, the Government of Guyana has also issued another One Thousand Two Hundred (1200) acres of land which will accommodate the Housing Development. This modern day development which is estimated to be US\$200M will be a gated community which will provide housing or both Western and Eastern designs of three

Low Income Houses-We Plan to unifice 150acres of land to construct an estimated 1300 houses which will be 50ft a 50ft and the house size approximately 850sq feet.

Middle Income Houses-In addition to the 1300 houses another 150 acres will be utilized to construct 600 houses which will be 75ft x 75ft and the boose size will be approximately 3500sq feet.

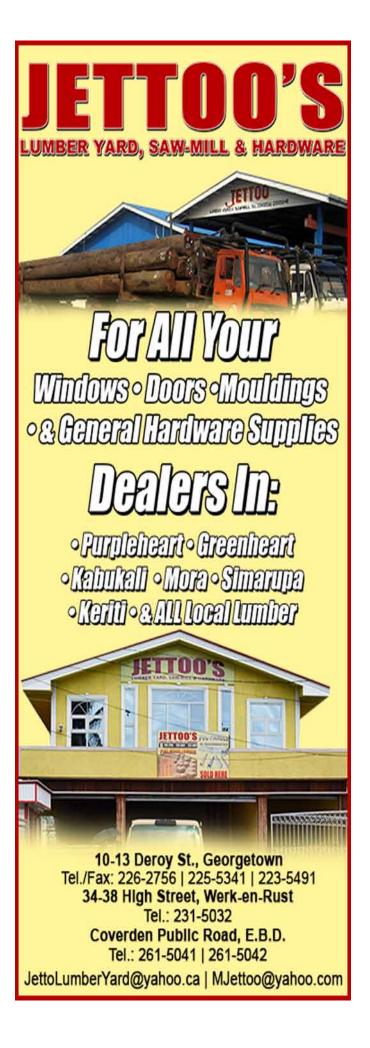
High Income Houses-Net mother 155 acres of land will be used to construct another 300 houses which will be 10ft a 1006 and house size being approximately 0000-5500 sq feet.

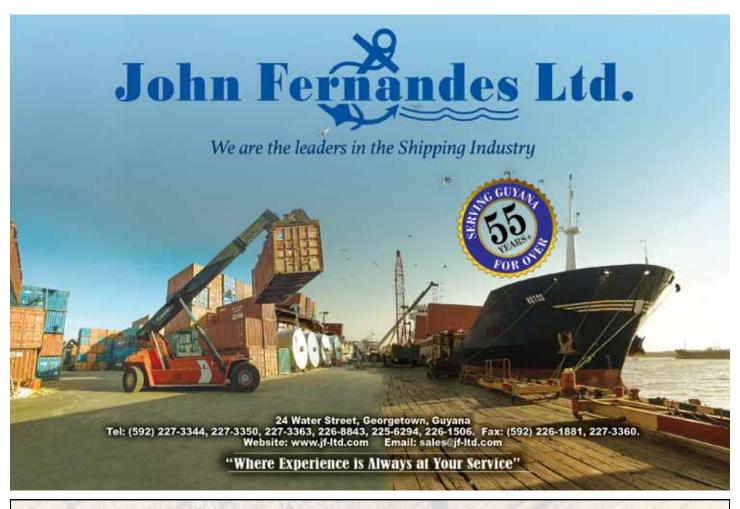
These Houses will be monitored by modern security and will be equipped with a collection of Solar Powered Systems including Solar Lighting Systems which will power Street Lights. Turf Lights, etc. Solar Powered Emergency Systems which will be installed in each household to ensure continuous backup power supply for more than owney four (24) hours Solar Water Heaters, Electromagnetic Cooking among others.

#### CHINA FOREST INDUSTRY GROUP CO.

#### Tract SA Block 2 Providence

E.B.D (East Bank Demerara, Guyana, South America Tel: 592-265-7045/7048





## **CUMMINGS WOOD PRODUCTS**

Caledonia, East Bank Demerara Tel: (592) 261-6401; 624-0067; 668-8912 andrec.cummings@yahoo.com









## Why do business with the

## **Guyana Forest Industry?**

he Forestry Industry of Guyana is one of the traditional industries that has contributed throughout the history of economic development of the country. The country has earned international recognition for the quality of Sustainable Forest Management (SFM) practices which has been realised by strong regulation from the Government and quality compliance from the industry. The International Tropical Timber Organisation (ITTO), has rated Guyana amongst the top SFM countries in the world within the tropical region.



the United States under the Lacy Act and with the European Union under the European Union Timber Regulations (EUTR), seems unhindered using the existing national due diligence processes.

for Guyana. Currently, trade with

This is credited to the industry's quality of compliance with the strong regulatory controls in place. This is an excellent indication of the low-risk associated with Guyanese timber against strict procurement policies.

This level of self-esteem places Guyana as a frontrunner producer in markets that are sensitive towards responsible and legal sourcing of timber. Complementing this accolade is

the fact that our timber species of medium to high density originates from natural tropical forest. There are certain unique natural features such as texture, colour, finishes and durability that are attractive about these species.

The diversity of species in the tropical forest allows for a wide range of applications. Application potential ranges from toothpicks to heavy structural timber in marine environment. Most species have natural durability against fungal and insect attacks. There are other species that are structurally sound and can be treated for increase longevity. Colours range from light brown, dark brown, yellowish, pinkish reddish, grayish mixtures along with the unique purple colour of purpleheart (Peltogyne spp.).

For decades these features have captured the interest of markets in North America, Europe, Caribbean and the aggressive Asian markets. Since the economic downturn in North America and Europe the Asian markets have been showing a keen interest in the usability of our species.

We have seen several foreign companies establishing a presence in the upstream forest activities with the ▶

## How prepared is Guyana for stricter international procurement policies?

Guyana has always seen itself as a self-starter in terms of responsible forest management. To date Guyana has been signatory to all the key conventions in relations to eco-system management and social protection of civil society. There has been no sustained direct market pressure against Guyana timber products internationally for decades. The general neo-procurement policies originating from the Western and European regions of the world affect less than 20% of our exports. This however has never limited our scope in attaining higher levels of credible legality and responsible management.

Guyana began addressing some of the current day issues approximately 15 years ago with the introduction of the log tracking system, Codes of Practices for harvesting, quota system, competitive land allocation and of recent the Low Carbon Development Strategy. This strategy has lent itself to the commencement of the Voluntary Partnership Agreement (VPA) negotiations with the European Union to establish a Forest Law Enforcement Governance and Trade system

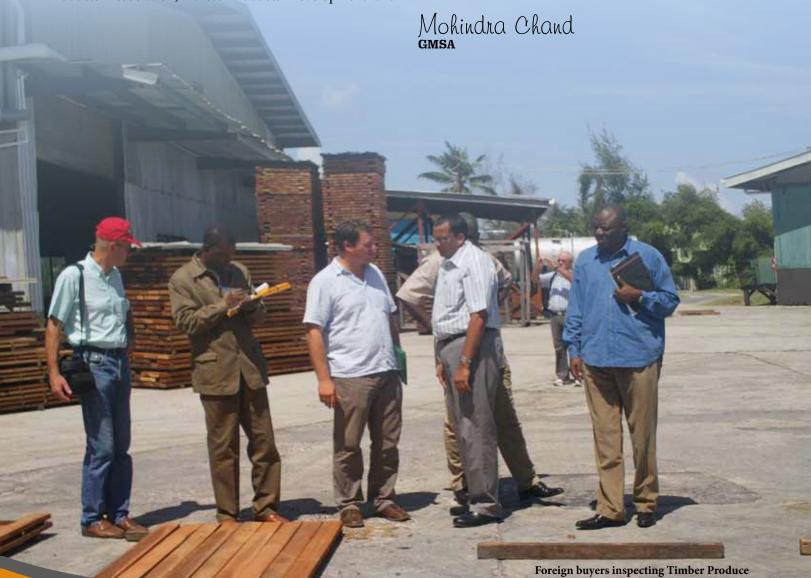
proposals to develop value-adding activities. The value-adding sector has tremendous scope for developing in line with international market needs.

There is potential investment opportunities to develop products such as flooring, wall paneling, ceiling, structural timber, pre-fabricated house and veneering where a variety of species can be utilized under a common user group. This can be fueled by an investment into a consolidated log stockyard where value-added manufacturing can form a direct linkage. Concomitantly, there are opportunities for several types of cottage industries such as briquettes, tool handles and other waste recovery products that can enhance the value chain of production.

There are certain key organisations that can provide assistance and support with such initiatives including Guyana Manufacturing & Services Association, Forest Products Association, Forest Products Development and

Marketing Council, Forestry Training Centre Incorporated and the subject regulator: the Guyana Forestry Commission. These organisations are working toward public private partnership to address training needs, value-adding development, product development among addressing international procurement requirements e.g. signing a VPA by 2015.

In summary, now is the opportune time to join the Guyana forest industry whether as a buyer or as an investor. Few tropical countries can present such a healthy combination of positive features in favour of trade and industry internationally. Linkages can be made with large, medium and small base operators at the primary and secondary levels. For those stakeholders with a marketing strategy to source timber products from community based operations, there are several such groups ready to do business. Guyana offers your business several advantages, so feel free to explore.



# The Benefits of Adding Value to Timbers in Guyana's Economy



dding value to timber is not only critical to optimizing the use of this invaluable resource but also addressing the very important social and economic impact of creating employment opportunities in all regions of Guyana, and earning valuable foreign exchange. Perhaps the most important consideration is the exponential increase in employment generation, as the latest F.A.O statistics show that primary processing of 1000m³ of logs result in only seven (7) persons being employed compared to one hundred and ten (110) from high value-added activities. Intermediary processing (saw milling) will result in twenty two (22) persons being employed for the same quantum of logs utilized (1000m³).

Additionally and equally important is the increased wealth creation that is derived from the added value product. The table shown below clearly demonstrates how prices move upwards even when first stage value adding is undertaken.

Species	Price, \$USD/ m³ Logs	Price, \$USD/ m3 Sawnwood (Green dressed)
Greenheart	165	840
Purpleheart	225	742
Mora	133	450

It is an established fact that the more processing that is undertaken the more the income generation would increase.

The value-added strategy would also fit perfectly into the Guyana Government housing policy and other builders' needs which create opportunities for well sawn, construction lumber as well as builders' joinery – doors, mouldings, tongue and groove flooring as well as home furnishing. The value-added strategy would also be consistent with Government policy of sustainable use of timber in the context of national policy where its contribution to mitigating the effects of global warming, as when wood is KD (kiln dried), carbon sequestration takes place.

How do we add value to timber in the context of the Guyana Forestry Commission's policy for sustainable use of timber? The most important factor in ensuring optimum use of a felled log is employing the best technology in sawing the timbers. Over the years Barama Company Ltd., for example has utilised band saw mills, which is a significant investment. Many local players in the industry have utilised portable mills which are also very efficient in producing good yields and satisfactory products which are required by high valueadded users in the manufacturing of furniture and mill work. Unless well sawn dimensioned lumber is available to end users for just-in-time delivery schedules in the quantity and quality required to produce furniture, construction lumber and builders' joinery, there will be no incentive for enterprises to invest significantly in the high value-added activities.

A typical high value-added mill-work plant geared towards both the local and export markets would cost in the range of one to two million U.S dollars, fully equipped with appropriate technology for machining and kiln drying. Only with that size of investment would economies of scale and profitability be achieved in order to satisfy market demand in a timely manner.

It is apposite to note the recommendation of the ITTO Diagnostic Mission to Guyana – May 2003 on actions needed by industry stakeholders to enhance value-added to Guyana's timbers. "The most important change for industry is to recognize the need for cooperation and for changes. The present situation is benefiting nobody other than Guyana's competitors. There is much to be gained from cooperation, which could bring benefits of synergy to all players".

Most players in the industry need to revise their present strategy and to determine where in the production chain they can operate most effectively. Not all need to have (forest) concessions, provided they have access to appropriate supplies of raw material at fair prices. Such a change would reduce the demand for capital and improve profitability ▶



if done correctly.

Product areas therefore which merit development by direct foreign investments for joint ventures with local partners are as recommended by Vicente Molinos in "Considerations for the Development of Guyana's Wood Products Industry submitted to the Ministry of Finance August 1995":

## 1. Specialty industrial flooring with dense hardwoods

This is the simplest opportunity for existing sawmills and some of them are pursuing it. Little or no investment in fixed capital is required for a first phase. To penetrate this market, traditional producers must invest in training and professional management which will allow them to reduce their costs

incrementally by 30% or more. In a second phase, to gain market share in this very competitive market, they will have to activate existing kiln capacity or acquire kilns and boilers. Preliminary estimates of investment cost are in order of US\$200,000 to US\$400,000 per sawmill depending on type, size, age and origin of equipment. To maintain market share in global markets over time, producers will have to improve the planning of their forestry and harvesting operations and increase their scale of operation.

## 2. Wood preserving and housing components plants utilising imported pine

These plants could gradually phase out imports by processing increasing volumes of some of Guyana's under utilised less dense hardwoods for millwork, joinery and later structural panels. Local markets should be able

to cover fixed costs if the initial investment in fixed capital can be kept under US\$100,000 by using an older plant and used equipment. Success is more likely if it can be added to an existing facility rather than making a stand alone investment. It could work well in conjunction with a construction firm specializing initially in home remodeling, repair and expansion, and building modular home packages for larger rural industrial projects.

## 3. Small plants for special furniture components and Veneer laminated blanks

Here the advantage could lie in the smaller volume exotic species which could provide a better appearance than traditional species for specialty products such as jewelry. A good opportunity exists for producing better quality and higher priced gift items for the domestic tourist

trade rather than that which is currently available in the market. These plants do not need much equipment but the know-how of market –savy industrial customers interested in joint ventures to tackle specific markets or problems.

## 4. Millwork and furniture parts joint ventures for global export

Joint ventures with large builders and architectural firms for supplying larger touristic complexes or institutional contracts in Caribbean countries should provide the experience and contracts for gradually branching

out of the region. In this regard existing foreign investors such as Barama would be in a good competitive position since their home countries are already manufacturing and re-exporting mouldings and decorative veneers with imported logs.

In conclusion, Guyana's timber industry offers tremendous opportunities for joint ventures between well established local export oriented businesses in sawmilling, builders' joinery and furniture manufacturing with kiln drying facilities which require additional investments to expand production for an increasing global demand of their product lines.

Mohabit Singh, CEO
Guyana Furniture Manufactuer (GFM)

## The **Wood-Mizer**Difference

## INNOVATION PERFORMANCE







## The Pinnacle of

#### Sawing Performance

- Operator Position: Walk along (standard), Ride on Operator Seat, Moveable Command Control, Wireless Remote Control.
- Hydraulic loading arms lift log onto bed
- Hydraulic Bi-directional chain log turner for maximum log control
- Hydraulic log clamp secures log
- 2 Hydraulic and 2 manual side supports stabilize log
- Hydraulic roller toeboards assists with leveling log on bed (total 2 toeboards)
- Bed extensions can be added for long logs (add 6', 12' or 24' sections)

#### **Power Options:**

- LT70HDD55 (55 HP diesel)
- LT70HDE25 (25/30 HP electric)

### LT40

#### Takes Sawing Seriously

- Operator Position: Walk along (standard), Ride on Operator Seat, Stationary Command Control, Wireless Remote Control.
- Deluxe Accuset2 setwork with 16 settings does all the calculations and automatically moves head for each cut.
- · Hydraulic loading arms lift log onto bed
- · Hydraulic claw log turner flips log effortlessly
- Hydraulic log clamp secures log
- 4 Hydraulic side supports stabilize log
- Hydraulic roller toeboards assists with leveling log on bed (total 2 toeboards)
- Bed extensions can be added for long logs (add 6', 12' or 24' sections)

#### **Power Options:**

- LT40HDD47 (47 HP diesel)
- LT40HDE25 (25 HP electric)

## A rugged and reliable sawmill

- Manual Log handling with cant hook
- Unlimited 6'8" bed sections can be added for long logs
- Sawmill bed with leveling feet sits on the ground and requires minimal lifting of the log
- Six side supports are fully adjustable to tightly clamp log and allows cuts within 1" of bed

#### Power Options:

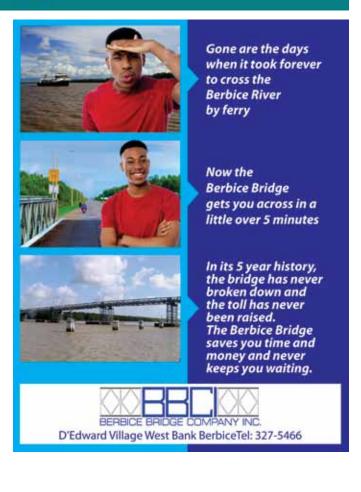
- LT15G25 (25 HP Gas)
- LT15E (10 HP 3 PH electric)



45 Urquhart Street, Georgetown. Tel: 225-7373, 226-8130, 226-6401 Fax: 225-8651 Email: info@fmlgy.com www.fmlgy.com







## Promoting wider application Species -

#### Better Utilization of the Lesser Used Species

uyana's forests are extremely diverse consisting of more than 1000 tree species of which, approximately fifty (50) are marketed on a commercial basis. There are species that are lesser used but are well known on the markets however, these may not be readily available in large quantities. Generally, species that are abundant on the local market for home construction are those that have been used traditionally for many years such as Greenheart and Purplehart. In some parts of the country where greenheart is not readily available such as Berbice /Corentyne, other species such as Kabukalli and Mora are well accepted.

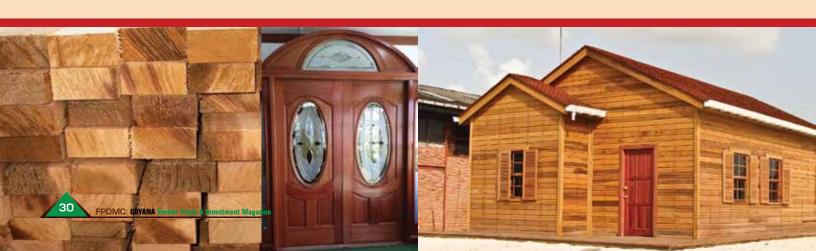
However, other commercial species such as Shibadan, Tatabu and Manniballi etc. are often accepted and are sold as mixed species. Problems often arise when some of these species deteriorate rapidly or are attacked by biotic agents such as fungi or insects.

The challenge that may also prevent the ready commercialization of these species may be due to their lesser quality or grade, which often is the result of poor sawing and grading of the harvested species. In many species, the sapwood is attacked by insects because it contains starch which is food for the insects.

However, with the proper implementation of the strategies as listed below, investors can overcome these potential hazards and secure both quantity and quality of the lesser used species to maximise their commercialization.

Marketing and promoting lesser used species should include the following:-

- 1. Grouping species with similar densities for specific end uses
- 2. Employing good sawing techniques to ensure quality grade
- 3. Educating the public on species selection
- 4. Selecting and promoting species for high priced niche markets e.g. garden furniture, boat decks etc.
- 5. Promoting appropriate species for mass applications such as doors, cupboards, spindles, mouldings and
- 6. Treatment should be considered for low density and the less durable species against fungal and insect attack. ▶



## of Guyana's Lesser Used Wood alternative Solution

Many of our lesser used species are suitable and probably even better than the ones generally used for example, Kereti Silverballi and Simarupa are popular for noggins for ceilings. These can be replaced by other species of Silverballi such as Gale, Kurahara and Wabima Silverballi which are also suitable since they have similar properties. Additionally, species that are low density such as Huruasa, Jack in the Box, Karohoro, Kirikaua, Korkororo, Kuyama, Kurokai, Long John, Maho, Mahoballi, Maporokon, Suya, Ulu, and Wadara are suitable for similar applications.

Brown Silverballi and Yellow Silverballi are used in boat making but other species equally good for this purpose are Determa, Koraroballi, Kurahara, and Wadara. Potaro Kakaralli, Wina Kakaralli, Kauta and Kautaballi are all excellent for in house construction of beams, as well as boards and planks but care should be taken to avoid splitting. Using proper processing techniques, these potential problems can be minimized or resolved.

Maporokon, Itikiboroballi, Darina, Morabukea, Limonaballi, are excellent for house frames as well as cabinets and cupboards.

Wallaba is the traditional species for electric poles but this species though abundant is becoming expensive due to several cost factors. Alternatives are Black Kakaralli or Potaro Kakaralli.

Munideran, Futui, Dalli, Duka, Dukali, Haiariballi, Bartaballi and Kurokai are excellent for mouldings.

Conclusions

The wide variety of wood species in Guyana's forests sometimes make marketing difficult, especially on the local market where traditional use has been limited to only a few species. Local foresters are very familiar with alternative species which can be used for a particular application. These alternative species, the properties which have been established through scientific testing will eventually be in greater demand because of the rising cost of the more popular species. As such there is potential opportunity for investors to get involved in the marketing of the lesser used species.

Khalawan, (MSc)
President of the Forest Products Association of Guyana
April 2014

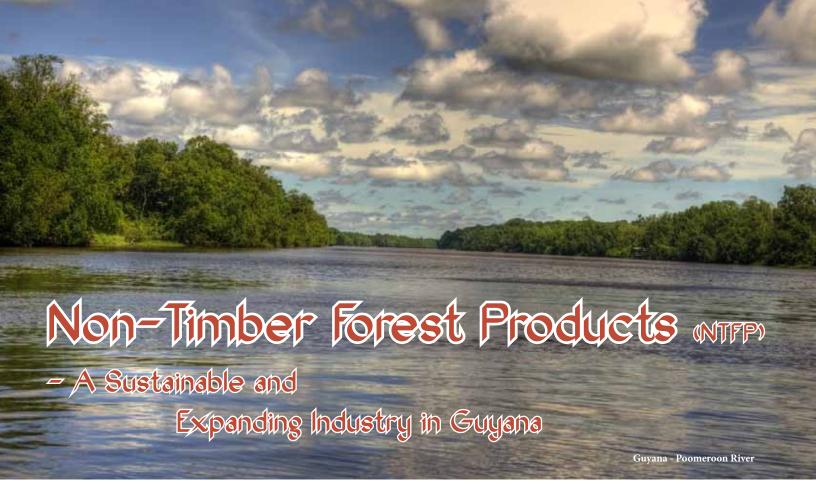




WARRANTY ON NEW MACHINES • EXCELLENT AFTER-SALE SERVICE • EASY & AFFORDABLE FINANCING



215 Cross Street, Mandela Ave, Alexander Village, G/Town, Tel: 592-225-8892 | 225-7909 | 225-8815 | 225-7905 | 225-7898 Tel:/ Fax: 225-8889 Email: guytrac.equip@gmail.com



s the WaiWai people say, "Chamotakiriwanhi nay": the forest is good. The forests of Guyana

are a rare treasure to be respected and conserved so that the benefits that accrue from them can be shared with equity among the peoples of Guyana. In order to ensure this ideal, those who utilize this essential resource sustainably should be supported and enabled so that future generations indigenous peoples, communities and the country as a whole may come to accept that it is only through its sustainable use that we can truly count our good fortune in a world of ever depleting and depleted natural resources.

To this end there has been an increased effort to maximize the utilization of non-timber products (NTFPs) from our forests. Our indigenous communities have for centuries harvested the seeds of various leguminous trees for their decorative skirts and ceremonial dress. They have used mucru,

harvested from inundated and swampy areas to make the various implements of cassava processing, such as the

As the WaiWai people say,
"Chamotakiriwanhi nay":
the forest is good.



ingenious matapee used to squeeze the poisonous juices from the bitter cassava as well as the sifters used for farine, tapioca and cassava flour that are the staples of their diet. Before the proliferation of plastics and even now, water was stored and palm and other fruit drinks shared in calabash gourds grown to all sizes and purposes. Men and women have traditionally lived in a balance with nature and in a balanced division of labor sustained by the use of renewable forest products. That many of these traditions continue is testimony to their long cultural appropriateness lasting and relevance. Simple technologies based on sustainably harvested and therefore perennially available forest resources are still the foundation of many indigenous, local economies.

Currently within Guyana, the most commercially used non-timber product is the liana ▶



(Clusia spp.) which is the basis of cottage and small and medium scale furniture production. The result is a product of choice for those who care about sustainable livelihoods and materials that meet the aesthetic and functional needs of the hospitality industry, as well as home and eco-friendly and sustainably conscious commercial enterprises. term liana is a generic name for woody rainforest vines that attach themselves to the towering trees which form the vast canopy of the Guyana rainforest, while the roots and multiple off shoots of the lianas droop down to the forest floor. Similar in look to the rattan furniture of the Far East, kufa orcupa (clusia spp.) is used for the structural elements of the furniture. Nibbi (Heteropsis flexuosa) is a small vine that grows from the forest floor up the trunks of trees and is used to bind the joints of the kufa frames. It is an important fiber for weaving as well, which gives a wicker-like appearance to many pieces. A fiber of the Itepalm garnered from the growing shoot is made by women in some communities, particularly in the Pomeroon River area, to produce a cord like twine called tibisiri, used in traditional hammocks. This cord provides a unique, rush-like appearance in seats and backs of more upscale furniture being manufactured from these NTFPs.

Lianas are harvested by a select group of indigenous men and are worked by craftsmen and women in communities and in small and medium sized enterprises to produce high quality furniture and architectural pieces. Some of these enterprises have shown their products at international furniture fairs and have benefitted from well known international designers such as Patty Johnson, John Michael Ekeblad, and Tony Whitfield. Liana based pieces have provided the studio stools for Aveda cosmetics renowned for their nature based products. There is increasing interest locally and internationally in products that offer financial opportunities. These also reward the conservation efforts of people who live in and around the forest in their communities. Bilateral assistance has been given by CIDA, USAID, EU and the Caribbean Export Development Agency as well as the Government of Guyana to strengthen and enhance these initiatives at all levels. The work of the Craft Association has been a main beneficiary in strengthening and enhancing local initiatives in basketry and other products made of tibisiri, mucru and nibbi. These initiatives provide skills training and help to bring products to market through exposure at international and regional trade fairs.





There is growing synergy between those who produce craft and those who are engaged in the more hand and machine based furniture production. The central role of design is a vital component of these up-marketing initiatives.

The new product lines open the space for other non timber based products (NTFPs) as well such as the reclamation of timber cut offs from logging and the increased mining activity for gold that results in some surface clearing to get to the minerals which are sub-surface. With the advent of the Ministry of Natural Resources and the Environment (MNRE), there is increased pressure at the policy and operational level for more environmentally and socially responsible utilization of the forest resources. This however, has to be fully institutionalized across all land use agencies in an accelerated, synergistic and coordinated manner. There must also be more commercial linkages to ensure that the sustainable activities such as harvesting of the NTFPs, their value added production, the use of traditional dyes (annatto [red] and genipa [black] for example) and a score of effective medicinals grow to their full potential. The highly developed balata (natural rubber) craft at Nappi village in the southern Rupununi savannah (and in other villages that have access to this NTFP) for example, should again become a more focused activity for support. Guyana's Low Carbon Development Strategy should be the mechanism to enhance and strengthen these badly needed sources of sustainable livelihoods and such promising product lines.

Beyond this, sustainable harvest and use of NTFPs provide work and introduce new skills, develop craftsmanship and are capable of up-scaling so that indigenous and local peoples can form new enterprises and contribute meaningfully to the national purse, ever mindful of seeing the forest for the trees. They know and have always known that the forest is life for people and the planet.

This area offers great potential for new investors since there is an abundance of raw materials to make these niche market products, the harvesting of which is done sustainably by indigenous peoples predominantly. In addition to helping to develop sustainable livelihoods, this can also provide a tremendous strategic marketing opportunity.

Jocelyn Dow, ceo





#### VISIT US FOR THE LATEST TYPES OF NEW & USED TOYOTA VEHICLES









#### **Distributor For**

Toyota ForkLifts & Hino Trucks



**Quality Used Toyota** Vehicles

Pre-checked & Tested





#### SHOWROOM/PARTS

191 Wellington & Charlotte Sts. 227-0632-5, 227-1349, 227-2526 Fax: 225-0956

Mandela Avenue 227-7823, 226-5542, 226-5576 Fax: 227-7822

SERVICE CENTRE

balparts@beharrygroup.com balservice@beharrygroup.com balsales@beharrygroup.com



## Ready. Set. Go-Invest.

Your Gateway to Guyana

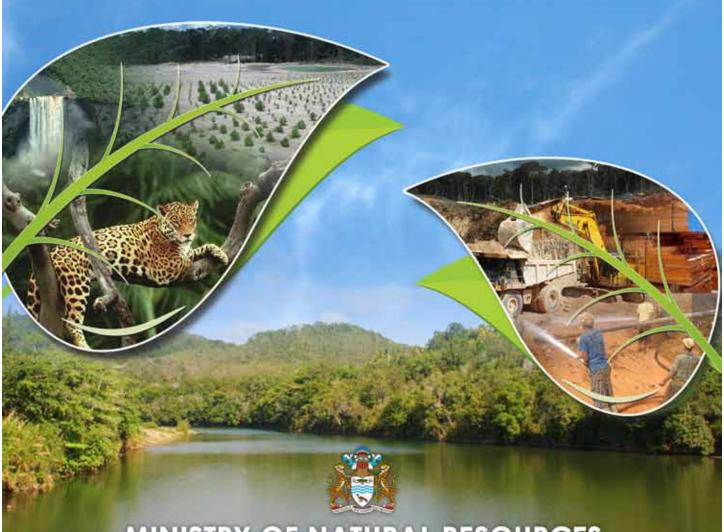
Fiscal Concessions are offered by the Government of Guyana to encourage investment in the following sectors: Agriculture | Energy | Forestry | ICT | Light Manufacturing Mining | Tourism and Services.

#### **GUYANA OFFICE FOR INVESTMENT**

190 Camp & Church Streets, Georgetown, Guyana, South America Tel: (592) 225-0653/58; 227-0653 | Fax: (592) 225-0655 E-mail:goinvest@goinvest.gov.gy | www.goinvest.gov.gy/guyana.html



# Promoting Sustainability in the Natural Resources and Environmental Sector



# MINISTRY OF NATURAL RESOURCES AND THE ENVIRONMENT



Forestry Training



Genuna Ferreir



Guynna Geology



Gurana Gold Board



Guyana Lands A Surveys Commissio



Environmental



Guyana Wildl



Nutsonal



Protected A



Farrit Products Develop & Marketing Coun-

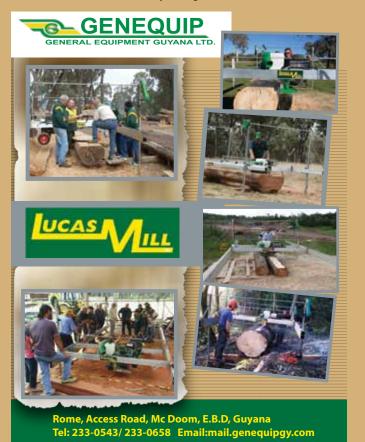


Guyana Mining School and Training Centre Inc.



**David H. Persram**, a recognised forester, has dedicated most of his life to serving the forest industry. He is regarded by some as an authority where forestry matters are concerned. After completing his secondary education locally and serving in the teaching profession for a short while, Mr. Persram proceeded overseas to study forestry at the University College of North Wales Bangor where he graduated with a BSc in Forestry. On his return to Guyana in 1960 he joined the Guyana Forestry Commission where he thereafter established a name for himself in the Industry.

It is obvious based on the many portfolios held that David Persram worked his way through various designations climbing his way to success through experience and exposure to various facets of forestry. His portfolios included Assistant





Conservator of Forests, Senior Assistant Conservator of Forests, Deputy Conservator of Forests and Conservator of Forests. At 61 years of age in 1993 he retired from the Forestry Commission.

Though retired, Mr. Persram continued to avidly contribute to the forest sector through his appointment as Chairman of the Board of Directors of the Guyana Forestry Commission, then in succeeding years up to 1998 served as a member of the Commissions' Board.

Currently at the age of 83 years old, he has continued his passion for forestry by becoming involved particularly in the identification of woods and trees. He has further diversified into furniture manufacturing, and he specializes in inlaid tables of all sizes as well as species sample boards and other small but lucrative craft pieces.

His years of experience in the field of forestry has improved his skills in species identification enabling him to match suitable species to produce signature pieces that can be recognized as his work the world over. One of his most important contribution to the development of the sector is his incorporation and promotion of the Lesser Used Species (LUS) in his works.

The evidence of species diversity (focusing on the Lesser Used Species) in his work is immense. He firmly ▶

# Profile of DAVID PERSRAM an Experienced Forester

believes that the LUS, once treated and applied in the correct

way, can be utilised at a commercial level and be of benefit to the country and the world at large. His time spent producing various works of literature as well as species sample boards (sustainably made from offcuts) is indicative of his belief that the key to widening species use is to educate potential users of wood/timber of their values and application use. In so doing the knowledge acquired would enable buyers to confidently select species that are in abundant supplies, in an informed manner to fulfill their needs.

At another level, his methods of procuring future markets and gaining recognition for the industry is commendable. He sends multiple samples of species abroad for potential users to conduct product testing and determine species performance so that the best performing species out of a lot of samples can be selected for a specific product or products. His marketing techniques can be used as a model by stakeholders with less experience in the industry to garner markets for their products.

Mr. Persram, a life member of the International Wood Collectors Society based in Chicago, USA, supplies samples of wood to members who are wood users/lovers internationally. He is also a member of the

International Association of Wood Anatomists. Specifically David Persram has researched and recommended Guyanese species of wood for musical instruments such as the violin.

David Persram has contributed significantly to local stakeholders in the industry in roles such as technical consultant to companies such as Barama Company Limited and Guyana Furniture Manufacturing Ltd. Additionally, he operates a small cottage industry and has established an alliance with forest communities who continually supply him with special orders of species he relies on for his manufacturing needs. He played an integral part in the Courts Barbados Ltd as chief judge to determine the furniture manufacturer of the year winner. In the year 2000 he was selected by the International Wood Collectors Society to make a presentation on forestry in Guyana.

Mr. Persram having accumulated vast knowledge and experience in the area of forestry, specifically the silvicultural aspect of forestry, authored a forestry training manual on "Identification of Trees and Woods". This Manual was commissioned by the Guyana Forestry Commission and the Caribbean Human Resources Development Programme for Economic Competitiveness (CPEC).

Still very active in his eighties, Mr. Persram has a vast quantity of carefully compiled species neatly cut, dried and prepared for their end use application. Mr. Persram sees himself continuing the pursuit of his passion for some time to come. He supplies woods, wood samples and wood crafts to over 400 clients locally and internationally including the Guyana Forestry Commission. He also supplies samples to select universities such as the University of Taiwan.

David Persram recognizes the great opportunities that exist in Guyana for value added timber production utilizing the vast array of timber species that exist, especially the lesser used species. He should know as he is an expert in this department.

Forest Products Development & Marketing Council of Guyana Inc. (FPDMC)





uyana is at an interesting stage of national development as it has chartered a low carbon development path to align with the country's sustainable development goals. Guyana's Low Carbon Development Strategy (LCDS) is helping to transform the country thereby seeking to balance the nexus between environment and development-Guyana's vast tropical forests which cover approximately 85% of the country play a significant role in this process.

Guyana has maintained a low deforestation rate over the years attributed to conservation efforts and the sustainable management of its forests as a major national priority. In doing so Guyana has provided a great service to the world. Forests store carbon dioxide (CO2) and by opting to reduce deforestation, the country has reduced the levels of CO2 emitted into the atmosphere, thereby reducing the threat of climate change.

The LCDS launched in 2009, seeks to create a low deforestation, low carbon, climate resilient economy with the major objective of transforming the economy of Guyana while addressing climate change. It recognises that the two objectives of protecting the forests and pursuing economically rational development can be reconciled by offering its standing forests for payments. Through the LCDS, funds earned from the climate services that the forests provide to the world are invested in priority projects,

outlined in the LCDS, to foster growth and development along a low carbon emissions path.

Guyana has already gained funding for the use of its forest for this purpose. Through a Memorandum of Understanding between the Governments of Guyana (MoU) signed (GoG) and Norway in 2009, Guyana is being paid for its performance through an incentive structure that rewards the country for maintaining low rates of deforestation, as well as, avoiding increased forest degradation. Norway has committed to providing Guyana up to USD \$250 million by 2015, depending on the country's delivery of results as measured against several indicators. To-date the country has earned US\$115 million in payments for forest climate services through this partnership - making it the second largest Interim Reducing Emissions from Deforestation and Forest Degradation plus (REDD+) arrangement in the world.

The LCDS recognizes the economic and social importance of Guyana's forestry sector and does not require forestry and mining activities to stop. It does however place great emphasis on sustainable management of resources and integrated land-use planning and management as key tools towards achieving a balance between development and environmental protection. Such approaches help to reduce conflicts among key sectors and help to enable more broad based approaches to decisions making. The Strategy



aims to stimulate growth and employment within the sectors as national development remains a central overarching goal of the strategy.

The LCDS targets actions that aim to reform existing forest-dependent sectors where necessary, so that these sectors operate at the standards needed to sustainably maintain the forest. The strategy recognises the importance of value adding and improving the competitiveness of the forest products industry and their role in promoting sustainable development. One of the Government's policies is to support companies operating in Guyana to generate substantially more value from the limited portion of the forest where sustainable forest harvesting is appropriate.

New investments in processing activities in Guyana would facilitate even greater production of higher-value wood products that meet international standards for export and could bring new capabilities in waste minimization and recovery, as well as market linkages to enhance export value of processed products. In addition Guyana will support local and international firms in increasing end-user demand for products from Guyanese species. In order to realize this extra value, the Government has prioritized building a foundation of strong regulation and standards enforcement, so that industry growth in the years ahead will be built from a base that can meet emerging global demand for high quality products.

Since launch of the LCDS, significant work has already taken place towards the goal of aligning Guyana's laws and practices with international best practice in this field. Guyana has been undertaking several initiatives to that effect. The Guyana Forestry Commission (GFC) has been implementing one of the most advanced Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (REDD+) Monitoring Reporting and Verification Systems (MRVS) to establish a comprehensive, national system to monitor, report and verify forest carbon emissions resulting







from deforestation and forest degradation in Guyana.

The MRVS is helping the country to determine the historical and current patterns of deforestation and their drivers. The system is helping to develop a robust performance-based framework to allow REDD+financing, natural resources planning and management, and a multi stakeholder approach to informing decision making at national and local levels.

Additionally, Guyana has advanced its programme of work on implementing national level Independent Forest Measurement (IFM). The use of an independent third party, by agreement with state authorities, provides an assessment of legal compliance, and observation of and guidance on official forest law enforcement systems, based on agreed principles.

Efforts have also been made to align domestic standards in the forestry sector with those of a global body to support the long term development of trade in sustainable forest products. This will enable all parties who trade with Guyana to know that all forest products that originate from Guyana meet high internationally recognised governance and sustainability standards. Although a number of standards exist internationally, the Government chose to align with the European Union's Forest Law Enforcement Governance and Trade (EU-FLEGT) Voluntary Partnership Agreement (VPA).

Many other key initiatives have been on-going and have been targeted to continue Guyana's thrust towards sustainable forestry management, forest conservation and protection as the country continues to implement the LCDS.

Central to the success of the LCDS is that it was home-grown and nationally driven. Sustainability lies at the core of the Strategy and initiatives will continue to be developed along a path that will allow for both environmental protection and economic development including continued development of the forestry sector.

Office of Climate Change







# UNIVERSITY OF GUYANA

### **Focuses on The Training of Young Forestors**

The University of Guyana which is the country's National University, was established in 1963. It has always maintained rigorous academic standards, and many of its graduates have gained national and international recognition in a variety of Forestry careers.



### The Forestry Department

he Department of Forestry is a center of excellence in teaching and research; a well-equipped focal point in the dissemination of knowledge and skills development in the forestry sector both nationally and globally. The Department produces highly skilled personnel in forestry resource management for Government entities, non-governmental and private sectors bodies. It works to address emerging national and international needs in developing professionals with the appropriate competence and technical knowledge. As a Department of the Faculty of Agriculture and Forestry, the focus is on providing academic programs in the area of Forestry; two undergraduate programs are offered—a Diploma in Forestry and a BSc in Forestry.

With the support of the UK Department for International Development (DFID), both programmes have been extensively revised to offer modern, international-standard forestry training to meet the needs of the forestry and related sector in Guyana and the Caribbean region.

Currently the Forestry Department has more than sixty (60) students enrolled and nine (9) full time members of staff who are involved in the delivery of its programmes. All possess considerable experience in their respective field such as Siviculture, Forest Engineering, Forest management, Environmental Forestry and Natural Resource Management. In addition, there are several visiting or part time national and international specialist lecturers who are highly accomplished in their fields. To support teaching, the Department has its own building with a well-equipped, modern Forestry Learning and Resource Centre for Skills Development.

The Diploma is a two-year programme aimed at persons wishing to embark on a professional career in forestry; as well



as forestry personnel wishing to extend their knowledge, skills and qualification.

This programme introduces students to general forestry as well as provides a solid grounding in Mapping & Surveying, Soil Science, and the Social and Physical Sciences.

It also concentrates on the technical forestry subjects such

as Dendrology, Forest Ecology, Inventory and Mensuration, Forest Management, Harvesting and Utilisation, Forest Engineering and Silviculture. In addition, there are introductory courses in Human Resources and Financial Management and Computers in Forestry.

There is a strong emphasis on gaining hands-on experience with many field trips to forest locations and forest operations locally as well as overseas.

Diploma graduates generally fill supervisory and junior management positions in the Natural resources sector including the Guyana Forestry Commission, as well as the environmental sectors.

The BSc degree programme which is a continuation of the Diploma programme for an additional two (2) years, is designed to provide a high quality professional forestry education. Courses reflect the current scope of modern forestry and equip students with the knowledge, and analytical, communication and professional skills required for a wide range of career applications.

The degree programme comprises courses ranging from Community Forestry & Extension, Forest conservation,

forest Recreation & Tourism and Forest Protection to Wood Science, Forest Economics, Forest Industries and marketing, and remote Sensing and GIS, Soil and Water Conservation, Business Administration and Forest Policy and Laws, Environmental Forestry, Wild life Management, Agroforestry & Rural Development, Forest products and Processing and Project Management Research methods in Forestry and Forest Concession and Reserve management Plans.

The latter two provide the foundation for two pieces of individual work, the development of a forest management plan and the conducting of a research project.

Practical work and real life experiences are emphasized; thus an important component of the programme is to develop the skills level and competence needed for the industry. This takes the form of summer-vacation work attachments with the Forestry Training Centre Inc., the Guyana Forestry Commission, the larger scale logging companies such as Barama Company Ltd., Demerara Timbers Limited and other forestry or environmental organizations both in the private and public sectors.

Approximately three hundred and twenty five (325) persons have graduated since the inception of the Diploma and Degree programs in 1987.

#### Research



Our students have conducted both applied and academic research on issues related to industry and the environment. Their main focus is finding solutions to problems. Some current research focus

include - developing solar drying schedules for Guyanese



timber, Tissue Culture of forest trees, Mangrove Forest Management, Biomass estimation in mixed forest, soil organic carbon estimation, rehabilitation of mined-out sites (Post-plantation

Management) and application of remote sensing techniques to determine forest degradation in dry evergreen forest etc.

### Where Our Graduates Go



Our graduates go on to work with Government agencies such as the Guyana Forestry Commission, the Ministry of Natural Resources and the Environment, the

Protection Agency and the Guyana Geology and Mines Commission. They have also been recruited by the Forest Products Association, the Forest Products Development and Marketing Council Inc. and Iwokrama International Center for Conservation and Development. They are also employed as technicians, middle managers and senior functionaries in both the private and public sectors.

Finally some of our graduates have continued their professional development at the MSc and PhD levels at leading Universities in the Caribbean, North America, Europe and further afield.

#### Forestry Department, University of Guyana





### FORESTRY TRAINING CENTRE INCORPORATED

# **Providing Skills for the Forestry Sector**



Southern view of FTCI's field camp



Graduation photo for residents of Ituni Community



Students of the University of Guyana in a practical training session

he Government of Guyana in collaboration with the Forest Products Association of Guyana and the Tropical Forest Foundation (Virginia, USA) established the Forestry Training Centre Incorporated (FTCI) in May 2002 with funding from the International Tropical Timber Organization. Other support came from the Department for International Development(UK), World Wildlife Fund (Guianas), Caterpillar Company and Farfan & Mendes Limited (vendors of STIHL chainsaws).

The primary objective of FTCI is to offer practical training based on reduced impact logging principles and practices to forest operatives, students, public officers, representatives of forest based communities and representatives of environmental NGOs. FTCI carries out its training by running a model logging operation and providing hands on training to trainees at a special field facility (see Figure 1). Since everyone can benefit from practical training, FTCI occupies a unique niche in the forestry sector and works closely with the University of Guyana (Faculty of Agriculture and Forestry) and the Guyana School of Agriculture which provides academic courses in forestry.

FTCI offers a number of courses including forest surveying and mapping, forest inventory, directional felling of trees, occupational safety & health, and forest botany and forest management for communities. FTCI also demonstrates the application of prescriptions set out in Guyana Forestry Commissions' Code of Practice for Timber Harvesting and other standards and guidelines published from time to time. Courses have a duration of five (5) to fifteen (15) days. Both genders are targeted.

FTCI has collaborated with FAO's Caribbean office to carry out training in Grenada, St. Vincent, and Belize. FTCI also works regularly in Suriname.

In 2014, FTCI will be starting courses on wood processing for operatives in the sawmilling and joinery sector.

Article supplied by: Forestry Training Centre Inc.

# IWWKRAMA Links Business to Research:



which is IIC's biodiversity reserve and 'control' area. The remainder, called the Sustainable Use Area (SUA) was demarcated for development work where the Centre's timber model and all of its other business development activities, including tourism and training services, are undertaken.

The SUA includes a Net Operable Area (NOA) for sustainable timber harvesting which is approximately 108,000 ha and constitutes only 29% of the total forest area. Using the Guyana Forestry Commission's recommended Annual Allowable Cut (AAC) of 20 m3/ha for a 60-year cycle, the maximum annual harvesting area would be 1,800 ha (0.5% of the total forest area) and the allowable cut would be 36,000 m3/ year.

### Management and Partnerships

The Centre is replicating its overarching management and sustainability protocols in the timber operations by building local and regional capacity in sustainable forest management including but not limited to models of benefit sharing amongst multiple stakeholders, Reduced Impact Logging (RIL), and the use of non-traditional species. Techniques for improving logging and processing efficiences and the production of value added products will be the main tools of this second phase of operations.

IIC's partnership with neighbouring local communities provides an innovative model for sharing benefits, as it is based on ▶

#### APPLYING BEST PRACTICES TO SUSTAINABLE TIMBER OPERATIONS

ownership (communities have moved from stakeholders to shareholders) and formalizes the arrangement of co-management of forest resources between the Centre and the communities).

### Harvest Planning and Operations

Selective harvesting is planned and executed according to strict Reduced Impact Logging (RIL) guidelines whereby all commercial species to be harvested are identified, measured, marked and mapped. These tree-location block maps are then used to layout roads, bridges, log-markets and skid trails in an efficient manner, avoiding any unnecessary road construction and reducing the number of watercourse crossings. Directional felling techniques are used to minimize gap sizes and to reduce logging debris in the creeks and streams. On average, no more than 5 trees per

minimal, and operational cost is carefully managed.

#### **Processing for High Quality Products**

IIC plans to consistently produce the highest quality rough sawn lumber in terms of grade and dimensional accuracy and at the highest possible recovery rates from log volume. We expect to install value added equipment to produce products such as kiln dried flooring and decking that match the properties of our species to niche, high end markets.

The focus will be on sawing for grade rather than sawing for dimension against specific orders, concentrating on the recovery of value through proper planning, efficient operations and appropriate value added production. This focus will permit Iwokrama to offer specific high quality products to their clients and ensure delivery in a timely manner.

The Iwokrama International Centre continues to employ protocols and pratices that demonstrate how a tropical forest can be conserved and used sustainably for ecological, social and economic benefits to local, national and international communities. All of Iwokrama's models are designed to follow international best practices and employ innovative governance systems involving various stakeholders.

For further information please contact: Mr. Ken Rodney, Forest Manager

Iwokrama International Centre,

77 High Street, Kingston, Georgetown, Guyana.

Email: krodney@iwokrama.org | Website: www.iwokrama.org



Barama is the largest and leading forest resource and wood products Company in Guyana since 1991. We have the largest forest concession and harvest a wide variety of species like Purpleheart, Greenheart, Mora, Bulletwood and other Mixed Hardwood.





Barama manufactures Baromalli plywood products of excellent quality with various grades and dimensions.

We offer four types of plywood:

- 1. S2S(Sanded both sides) both sides are perfect, for high-end applications
- 2. S1S(Sanded-one-side) one perfect side and one with natural surface
- 3. OES(Oil Edge Seal) both sides are oiled for less water absorption
- 4. UTY/Shop general purpose applications

### LUMBER

Barama offers an extensive range of lumber species.

Premium hardwood products includes: Purpleheart, Greenheart, Bulletwood, Kabukalli and Mora.

Lesser used species(LUS) includes: Dakamaballi, Limonaballi, Burada, Locust, Washiba and many more.



### LOGS



Barama adopts best practices in its forest concession through Sustainable Forest Management (SFM) and currently holds the largest single block of tropical forest certified under Verified Legal Origin (VLO) in the world.

#### BARAMA COMPANY LIMITED

Skype: barama-guyana

Plywood and Sawn Lumber Complex Land of Canaan, East Bank Demerara, Guyana, South America Tel: (592) 266-5633 Fax: (592) 266-5634 Email: sali@baramagy.com, djaisingh@baramagy.com Website: www.baramaguyana.com

RAINFOREST ALLIANCE VLO CERTIFIED (RA-VLO-006137)



# FLEGT GUYANA

### Supporting Responsible Trade for Guyana's Forest

#### **GUYANA FOREST LAW ENFORESTMENT GOVERNANCE & TRADE**



n 2012, after consultations with key stakeholders, a policy decision was taken to enter into formal negotiations with the European Union on a Forest Law Enforcement Governance & Trade Voluntary Partnership Agreement (EU FLEGT VPA), which is a bilateral Trade Agreement that forms the EU's response to the problem of illegal logging and trade in associated timber products, and is aimed at ensuring that only legally produced timber products are imported into the EU.



uyana's main objective for the EU FLEGT VPA is "To provide a forest legality framework supporting sustainable forest management and trade, whilst improving Guyana's access to international forest products markets. "To advance Guyana's efforts with the EU on a FLEGT VPA, a FLEGT secretariat has been established in Guyana. There has also been the formation of a multistakeholder steering committee for the VPA negotiation and implementation efforts called the National Technical Working Group (NTWG), and development of a Joint Roadmap for Guyana to guide the VPA process from 2012-2015. From 2012 to present a series of work (pursuant to

the Roadmap) encompassing the exchange of experiences, development of documents and stakeholder consultations, were undertaken.

Key milestones achieved during this period included:

- ✓ First and Second negotiations held in December 2012 and July 2013 respectively.
- ✓ Draft Legality Definition for Guyana FLEGT VPA.
- ✓ Draft Regulatory Framework which defines what constitutes legal timber in Guyana's context.
- ✓ Draft Product Coverage outlining the products to be covered under the agreement.



n recognition of the importance of stakeholder contribution to the process, several stakeholder engagement activities were carried out nationwide. The NTWG, in collaboration with the United Nations Food and Agriculture Organization, under the EU FAO FLEGT and ACP FLEGT Programmes, conducted these FLEGT Awareness Sessions with the aim of enhancing stakeholder's understanding of FLEGT, presenting an update of Guyana's VPA process, creating a platform for stakeholder participation and eliciting feedback on the process, inclusive of the Legality Definition.

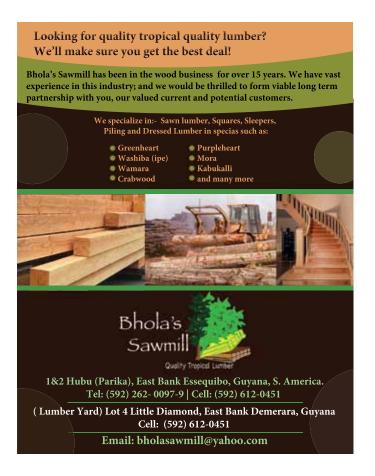
At the conclusion of this support, the Chain Saw Milling Project funded by the EU, through its second phase, provided financial and technical support, to the NTWG in advancing the stakeholder consultation aspect of the process.

These awareness and consultation sessions have been attended by representatives from every region of Guyana ▶

Guyana and targeted concessionaires, saw millers, civil society, Community Forestry Organizations, Local and International NGOs, Amerindian Villages and communities. The sessions were very instrumental as key issues of Guyana's VPA process such as imported forest produce, representation of stakeholders groups, Independent Monitoring, Health and Safety, Land Tenure and User Rights Issues, Child Labor and laws governing the same were raised and discussed.

FLEGT awareness & discussion forum in Karasabai, Region 9

n keeping with the Joint Roadmap, two projects: Development of a Communication and Consultation Strategy and a Scoping of Impacts Study have been implemented. The Communication and Consultation Strategy will be designed to advise on best practices to achieve the outcome of a strong and comprehensive



stakeholder engagement process while the Initial Scoping of Impacts Assessment will seek to inform Guyana's next steps in relation to bridging the gap between the current situation and what is required by the VPA across the various stakeholder groups. strong and comprehensive stakeholder engagement process while the Initial Scoping of Impacts Assessment will seek to inform Guyana's next steps in relation to bridging the gap between the current situation and what is required by the VPA across the various stakeholder groups.



ork on the Legality Assurance System, specifically the Legality Definition has progressed. The legality definition aims to capture the essence of what will be considered "legal timber" in the context of the VPA and is currently being customised to the Guyana situation using a participatory approach at the stakeholder level. Once consultations would have advanced significantly, testing of the legality definition will be carried out.

Although there is still much work to be covered by Guyana, it is imperative to note that dedication to this initiative is of paramount importance. As such, the NTWG in collaboration with stakeholders will continue to work steadfastly to ensure that Guyana formulates a pragmatic but holistic VPA which builds on existing systems, reflecting wide stakeholder engagement and exemplifies Guyana's efforts towards sustainable forest management. In this regard, stakeholders are encouraged to actively contribute to the process.

Potential investors in the forest sector are also invited to contribute to this VPA development, since it will impact on their marketing strategies. Important to note however, is that the EU has already noted that Guyana has existing structures and systems in place which should to be built upon to meet the requirements of a VPA. This will enable continuing access to the more lucrative global markets.

Comments, queries and clarifications on Guyana EU FLEGT VPA

process can be emailed to: euflegt@forestry.gov.gy

# Main Shipping Services out of Guyana

### LAPARKAN FREIGHT FORWARDING DIVISION

- a 1 Lombard Street, Georgetown, Guyana
- 592-226-1095/7
- guyana.shipping@laparkan.com
- http://www.laparkan.com

#### **MUNESHWER'S SHIPPING**

- ★ 45-47 Water Street, Georgetown, Guyana
- 592-227-7417/8
- wharf@muneshwers.com
- http://www.shipping.org.gy/agents/item/ 90-muneshwers-ltd

#### JOHN FERNANDES LTD.

- 24 Water Street, Georgetown, Guyana
- 592-227-3344, 227-3350
- agent@jf-ltd.com
- http://www.jf-ltd.com/group\_of\_companies

#### GUYANA NATIONAL INDUSTRIAL CO. INC.

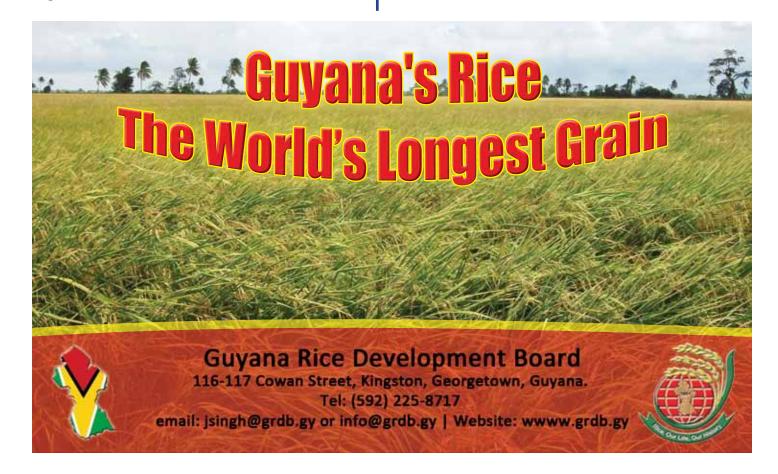
- ← 1-9 Lombard Street, Charlestown, G/town, Guyana
- 592-226-0882
- gnicadmin@ewirelessgy.com
- www.laparkan.com/.../industrial & gnic-guyana-national-industrial-corporation

### GUYANA NATIONAL SHIPPING CORPORATION

- ★ 5-9 Lombard Street, Georgetown, Guyana
- 592-226-1840
- freightdivision@gnsc.com
- http://www.gnsc.com

#### DEMERARA SHIPPING CO.

- 8-12 Water Street, Georgetown, Guyana
- ( 592-225-6774, 226-4455
- demship@solutions2000.net
- http://www.shipping.org.gy





# Craft



### **Amazon Authentics**

78 Robb Street, Georgetown & 66 Richmond Hill, Linden, Guyana

- +592-223-1234
- +592-444-6162
- +592-621-9303
- □ amazonauthentics@gmail.com

### Liana Cane Interior Ltd.

173 Charlotte Street, Lacytown, Georgetown, Guyana & 1 -5 Victoria Road, Sparendaam, Guyana

- C +592-225-8404
- +592-220-2751

# **Exporters**

### **Guyana Mat Company Inc.**

7 Middleton Street, Campbellville, Georgetown, Guyana

- **(** +592-227-2854
- +592-624-0500
- ☑ guymatco@gmail.com

# Sunshine Timbers Company Inc.

- **(**+592-676-9257
- ☑ achen724@gmail.com

### **G. S. Forest Resources**

- **(\*)** +592-218-0085
- +592-218-0054
- +592-626-7493
- gsfr@guyana.net.gy

# **Unity Timbers International Company Inc.**

- +592-676-9257
- ☑ achen724@gmail.com

# Sawmill/Lumber Yard

# A. N. Singh & Son & Daughter Lumber Sales

11-14 Lombard & Princess Street, Werk-en-Rust, Guyana

- (c) +592-226-2776
- **(\*)** +592-647-6237

### Parika Sawmills Ltd.

154 Parika, East Bank Essequibo, Guyana

- +592-260-4239
- □ parikasawmills@gmail.com

### **G&I Sawmills and Logging**

29 Pouderoyen, West Bank Demerara, Guyana

- C +592-264-2524
- C +592-624-7088
- ganeshcheddie@hotmail.com

# D. Rampersaud Lumber Yard

3 Good Hope, E. C. D., Guyana

**(\*)** +592-220-6914

### **Paradise Woods**

36 Almond Avenue, Roraima Scheme, West Bank Demerara

### **Dharmu Boodhoo-(Managing Director)**

- **(\*)** +592-654-9906
- **(\*)** +592-649-4926

#### Shoghi Boodhoo-(Managing Director)

+592-638-8627

### Specialises in:-

- 1. Greenheart, Purpleheart, Locust, Red Cedar and Mixed Hardwood Lumber & Squares.
- 2. Greenheart Marine Pilings.

### Davo Lumberyard-D. Pooran

20 Industrial Site, Eccles, East Bank Demerara, Guyana

- +592-233-2758
- +592-225-8404
- +592-616-5814

5 Railway line, Ogle, East Coast Demerara, Guyana

- +592-222-4066
- C+592-616-5814

# Rohit's Lumber Yard, Hardware & Sawmill

7 Good Hope, E.C.D & Block S & H. Pearl, East Bank Demerara, Guyana

+592+220-9574 Email:

□ rohitslumberyard@yahoo.com

### **R. Prasad Industries**

27 Grant 1802, Crabwood Creek, Corentyne, Berbice, Guyana

- +592-339-2245
- +592-623-6800
- □ rprasadind@yahoo.com

### Toolsie Persaud Ltd.

10-12 Lombard & Sussex Streets

Georgetown & Providence, East Bank Demerara, Guyana (Opposite Guyana Nat'l Stadium)

- +592-226-4071/5
- +592 -265-7510

# Y. Singh Lumber Yard and Sawmill

Timehri Public Road & 12 Lombard & De Roy Streets, Georgetown, Guyana

- C+592-261-2495
- +592-225-4507

### **Telack Seegobin**

316 Lusignan, ECD, Guyana

+592-220-5015

# Value Added

Furniture, Mouldings, Spindles & Doors

### **Eco Woods**

Sub Lot 'A', Land of Canaan, East Bank Demerara

- **(** +592-266-5414
- **(7)** +592-266-5464
- □ nizamameerally@yahoo.com

### **Modern Industries Ltd.**

3-6 Industrial Site, Ruimveldt, Georgetown, Guyana

- **(\*)** +592-227-5265
- **(**+592-226-9988
- **(**+592-226-9385
- ☑ kissoon@networksgy.com

### **Guy-America Furniture**

- 165 Mandela Avenue Georgetown, Guyana
- 17 Zeeburg, West Coast Demerara, Guyana
- 52 Parika, East Bank Demerara Guyana
- **(\*)** +592-225-7441
- **(\*)** +592-277-0589
- **(\*)** +592-260-4580
- ☑ guy-america@hotmail.com

# Shivrattan Moulding Establishment Ltd.

- 9B Kersaint Park, LBI, East Coast Demerara, Guyana
- 65DD Eccles, Industrial Site, East Bank Demerara, Guyana
- +592-220-3833
- +592-233-3872

# Shiva Woodworking Establishment Ltd.

5A Public Road, Enmore, East Coast Demerara, Guyana

- **(\*)** +592-256-3709
- **(\*)** +592-270-6573
- Shiva@gol.net.gy

# Unique Woodworking and Building Construction

90 Independence Street La-Grange, West Bank Demerara, Guyana

- **(\*)** +592-662-3997
- +592-610-4879
- Construction of Houses
- Manufacturing of Doors

# Forest Association

### **Forest Products Association of Guyana**

157 Waterloo Street, Georgetown,

**(\*)** +592-226-9848

# **Clients Contact:**

